The OIL and GAS JOURNAL
PRODUCING REFINING MARKETING

VOL. 24. NO. 11. TULSA, OKLAHOMA, AUGUST 6, 1925.

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Past Week's Production Trend Upward

Highest daily average estimated production this year, week ended May 30, 2,347,984 bbls. Lowest January 3, 1,911,730 bbls.

Inglewood's Increase Was Main Cause of a 9,851-Barrel Rise in the Country's Daily Crude Output

By James McIntyre

Highest daily average estimated light oil production this year, week ended January 17, 1,525,220 bbls. Lowest July 18, 1,374,173 bbls.

The Smackover Field in Arkansas shows no sign that the heavy oil production of that district is about to go on a decline. Following the completion of a 10,000-barrel Graves sand well in the middle of last week, Monday's field reports showed two wells good for 8,000 barrels and 3,000 barrels respectively.

In California, the Inglewood Field continued to show wells of such productiveness as to give that field an increase of 9,000 barrels a day as compared with the previous week and bringing its estimated output to 113,000 barrels a day.

Colorado supplied two exceptional wells, one in the Fort Collins Field in Larimer County good for 4,000 barrels, which occasioned no particular surprise, but the other in Moffat County, a district which had thus far disappointed its backers, caused comment. The Moffat County well, drilled by the Texas Production Company, showed that it was good for 2,350 barrels a day, and renewed hope in Moffat County.

Oklahoma supplied little production news worthy of comment, outside of the discovery of productive Bartlesville sand in the Garber Field in Garfield County, in a well offsetting the Sinclair Oil & Gas Company's Belveal farm Wilcox sand discovery. However, the new well is to be drilled deeper to the Wilcox. The abandonment of drilling wells following the disappointing showing of earlier wells in the Holdenville Pool in Section 35-8-8, where it was expected a major producing field was to be developed, was another feature.

In Kansas, the discovery of Wilcox sand with a showing of oil in the Section 3-25-9, Greenwood County, a part of one of the county's long shoestring fields, was interesting to operators. This has been exclusively a Bartlesville sand development.

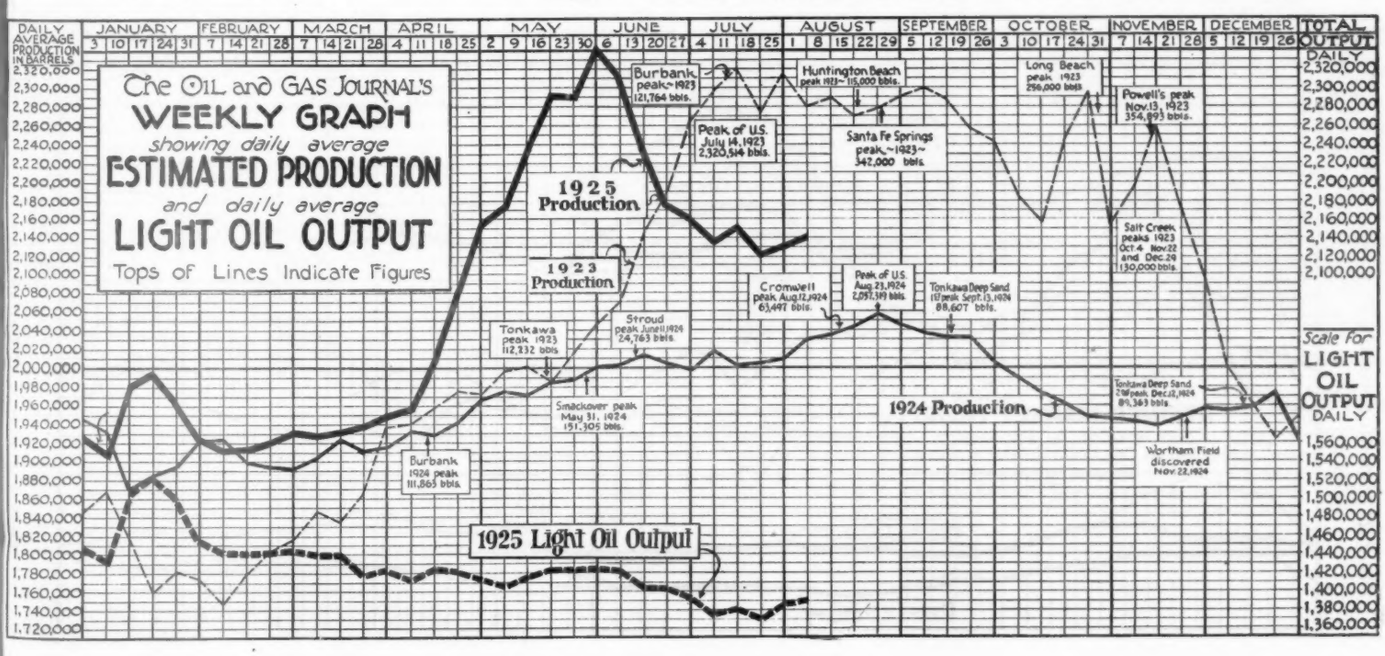
In the North Central Texas area much attention was paid to a wildcat in Haskell County being drilled by Adams and others, which passed through a number of strata containing oil, but which was continuing on down at the close of the report. Archer and Young Counties showed the best record of results in the north and central portions of the area, while Reagan County was given a production increase by a number of good sized completions. The first showing of production found on a saline dome located by modern scientific instruments in the Gulf Coast Field was reported in Fort Bend County, Texas.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for the week ended August 1, and a comparison with the previous week follows:

	Aug. 1		July 25	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	54,620		49,565	
Burbank	54,785		55,955	
Other Osage Fields	33,110		33,220	
Cushing and Shamrock	22,350		22,335	
Bristow and Eastern Bristow	32,740		33,385	
Cromwell	31,610		32,570	
Papoose	15,630		16,710	
Braman-Blackwell	18,020		17,490	
Northern Miscellaneous	122,500		123,025	
Southern Fields	61,200		61,870	
Total Oklahoma	446,565		446,125	
North Louisiana	50,053		49,343	
Arkansas—				
El Dorado and Calion	8,805		8,715	
Smackover Light	27,730		27,610	
Smackover Heavy		201,390		200,360
Stephens and Nevada	1,770		3,190	
Total Arkansas	38,305	201,390	39,515	200,360
North Central Texas	170,275		169,555	
Powell	45,850		46,200	
Mexia, Currie, Richland, etc.	23,078		23,210	
Wortham	28,410		29,760	
Kansas	105,480		104,535	
Total Mid-Continent Area	908,016	201,390	908,243	200,360
Gulf Coast		108,705		109,787
Southwest Texas		45,280		46,650
Eastern	106,950		106,350	
Rocky Mountain Area	99,375		97,975	
California—				
Santa Fe Springs	52,000		52,000	
Long Beach	105,000		105,500	
Huntington Beach	44,000		43,500	
Torrance		35,000		35,000
Dominguez	29,000		28,500	
Rosecrans	20,000		21,000	
Inglewood	13,000	100,000	11,000	93,000
Remainder of State	15,100	259,900	15,000	259,000
Total California	278,100	394,900	276,500	387,000
Total United States	1,392,441	750,275	1,389,068	743,797
Grand Total		2,142,716		2,132,865

→ **Total Increase, 9,851 Bbls.; Light Oil Increase, 3,373 Bbls.** ←



Group 3 Refined Situation Unchanged

Gasoline Prices Continue to Weaken but Reduction in Runs to Stills Predicted. Fuel Oil and Distillates Strengthen Further

By Neil Williams

Despite the fact that most sellers reported a fairly good movement of nearly all products, the Oklahoma (Group 3) refined market situation continued virtually unchanged during the past week. Gasolines kept up their steady decline while fuel oil and other heavier products gained greater strength.

With gasolines continuing downward it became apparent during the week to buyers and sellers alike that the market had not found a place to stop. Every effort of refiners to hold the market seemed in vain and with seemingly an abundance of gasoline available from other sources below prevailing market quotations, they were continually being forced to meet the competition of the cheaper products.

One of the most outstanding factors in the weakening gasoline situation was the announcement late Tuesday that the Mid-Continent Petroleum Corp. reduced gasoline prices from a quarter to a half cent a gallon. The action came as a surprise to buyers and sellers but was followed at once with general price concessions.

The announcement is expected to have an important bearing on the market trend as it is feared by market observers that the company has large quantities of gasoline to dispose of. The new quotations of the Mid-Continent Petroleum Corp became effective Tuesday noon and included U. S. Motor (58-60, 437) gasoline at 11½ cents and 56-58, 450 gasoline at 11 cents. The prevailing market Monday and Tuesday morning was 11¾ to 12 for Motor gasoline and 11¼ to 11½ on the 56 grade.

However, in the face of this steady decline, a feeling is becoming more and more general among the trade that prices are nearly at the bottom and that within the next few weeks there will be an upward reaction. This opinion perhaps is given support as a result of reports that runs are being reduced materially by Mid-Continent refiners and that the overproduction of gasoline the past few months will be considerably curtailed before the end of the month.

Although not completed at this writing, The Oil and Gas Journal's monthly refinery report so far bears out the belief that crude runs to stills are being held in check this month, but no so much as expected. Nearly all plants, which have reported so far, show a decrease in runs. There are a few plants unreported which could offset any decrease shown by those already in.

If it is true that refinery runs actually are being reduced, market students point out it can reasonably be expected that the bottom of the market is near and that the hopes of those predicting an upward reaction within a few weeks will be borne out. It has been admitted by all that the secret of the present gasoline weakness lies in the fact that refiners are running too much crude to their stills and are producing too much gasoline.

In line with this fact is the report of the Bureau of Mines for June. The report shows that although domestic consumption for the month set a new record, only 22,000,000 gallons of gasoline were withdrawn from storage. Market students point out that to have insured a healthy condition stocks ought to have been reduced at least 100,000,000 gallons during the month.

Although July and August is a period when consumption should draw heavily on gasoline stocks, it has been shown that the production of gasoline has increased to such an extent as to prevent a healthy depletion of the stocks. The Government figures for June reveal a total production of gasoline for the month amounting to 944,000,000 gallons, a 6 per cent increase over production of May and a 28 per cent increase over that of June, 1924. Domestic consumption during June was 868,000,000 gallons, a 7 per cent increase over May and a 27 per cent increase over June, 1924. Stocks at the end of June were 1,695,000,000 gallons, a decrease of only 22,000,000 from those at the end of May

REFINED MARKET BAROMETER

Declining gasoline prices generally, together with stronger fuel oil and distillates in some areas, continued to mark the week's developments in refined market of the country. The weakening refinery gasoline and an unstable tank wagon condition have caused a generally unsettled market situation. Consumption and movement of gasoline is at a peak in all districts but this has been offset by overproduction. However, a tendency, noticeable in the Mid-Continent, to reduce runs to stills, may bring relief. The strength of fuel oil and distillates is marked in the Mid-Continent in the face of large quantities in storage which refiners are holding for winter demand, but in California and Pennsylvania districts the situation is weak. Kerosene was quiet generally, but prices firm. Gas oil was steady in sympathy with fuel oil. Natural gasolines generally were weaker. Lubricating oils were active along the Atlantic and Pacific Coasts, steady in portions of the Mid-Continent, but slightly weaker in other areas. Wax showed greater strength.

Mid-Continent—Further declines in gasoline prices but additional strength for fuel and other heavier oils summed up the Mid-Continent refined situation. Reports of general reductions in crude runs to stills gave rise to predictions that the market was near its bottom. Natural gasolines weaker. Kerosene unchanged. Lubricating oils active, except few grades of neutrals. Wax steady.

Atlantic Seaboard—"Price wars" among gasoline distributors caused uneasiness in Atlantic Seaboard refined circles the past week. Consumption continued favorable but situation weak. Kerosene unchanged. Fuel and gas oil continue firm. Lubricants slightly stronger. Export market improving.

Pennsylvania—Pennsylvania refined markets quiet except wax and lubricants. Other products unchanged.

Chicago—Refined markets, except heavier products, decidedly weak. Demand for gasoline better. Kerosene more active. Fuel oil, gas oil and distillates stronger. Lubricants quiet.

California—Gasoline consumption excellent but peak in prices believed passed. Fuel oil and heavy distillates continue weak. Lubricants moving in large volume.

Situation Uncertain

Considering the Government figures and also the report of refinery runs for August, the gasoline situation is on an uncertain foundation. This is reflected somewhat in the fact that tank wagon prices are on a very unstable basis in many districts. The tank wagon price structure is badly undermined in numerous districts, particularly in and around various centers of population.

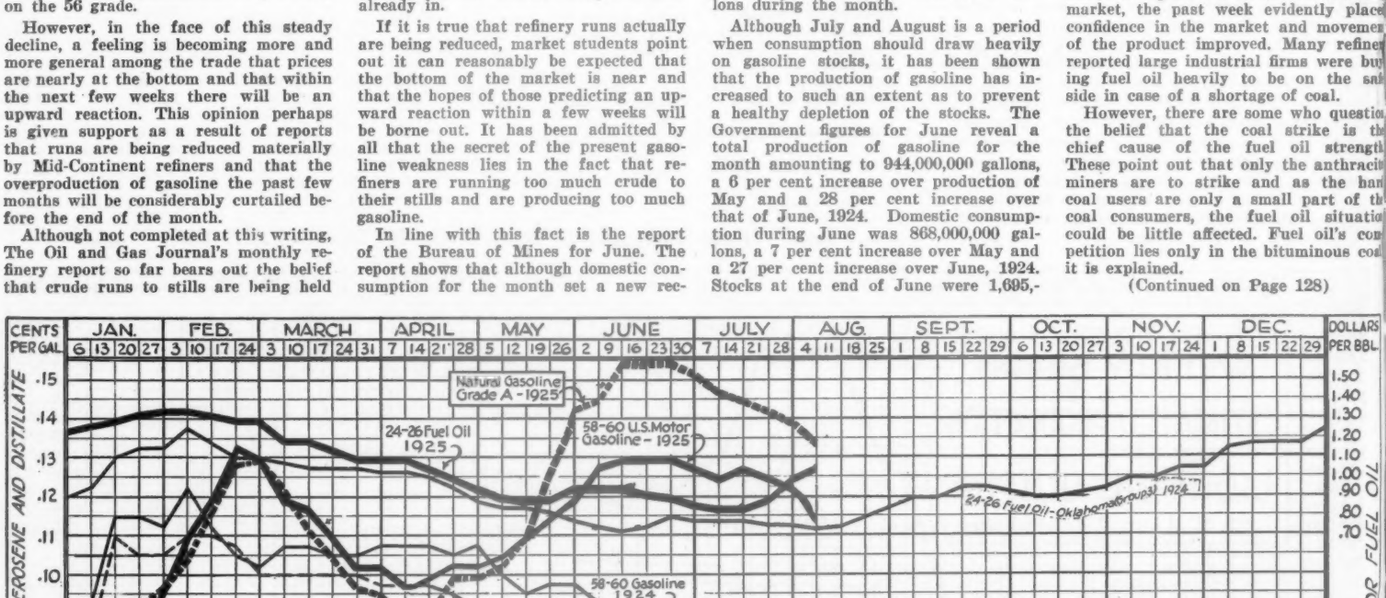
In the scramble for gallonage numerous instances of sales of gasoline 3, 4 or even 5 cents below the official tank wagon schedule have been reported. This battle was brought forcibly to the attention of all as a result of the two revisions in the quantity gasoline price discount scale of the Standard Oil Co. of Indiana in the last two weeks. These revisions presumably were made to offset the growing instability of the tank wagon market and to meet the competition of the price slashing influences.

In the contrast to the continued weakness of gasoline the past week was the growing strength of the heavier oils. The strength of fuel oil was plain despite the fact that stocks of the product were reported as unusually large. Because of impending coal strike propaganda and a reported shortage of dirty cars, refiners have been able to keep the upper hand in the market and hold out for increased prices.

Although for several weeks past buyers expecting a reaction, have been hesitant about taking on fuel oil on the advancing market, the past week evidently placed confidence in the market and movement of the product improved. Many refiners reported large industrial firms were buying fuel oil heavily to be on the safe side in case of a shortage of coal.

However, there are some who question the belief that the coal strike is the chief cause of the fuel oil strength. These point out that only the anthracite miners are to strike and as the hard coal users are only a small part of the coal consumers, the fuel oil situation could be little affected. Fuel oil's competition lies only in the bituminous coal it is explained.

(Continued on Page 128)


CENTS PER GAL
DOLLARS PER BBL.
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
THIS SCALE IS FOR GASOLINES, KEROSENE AND DISTILLATE
THIS SCALE IS FOR FUEL OIL
Natural Gasoline Grade A - 1925
24-26 Fuel Oil 1925
58-60 U.S. Motor Gasoline - 1925
24-26 Fuel Oil - Oklahoma Group 3 1924
58-60 Gasoline 1924
Natural Gasoline Grade A - 1924
The Oil and Gas Journal's WEEKLY CHART showing REFINED MARKET TREND ~as indicated by 5 products~ based on OKLAHOMA (GROUP 3) prices
Kerosene 41-43 W.W. - 1925
Kerosene - 41-43 Water White - 1924
38-40 Straw Distillate - 1924
Distillate 38-40 - 1925

Variations in Production by Gravity

Practically All of the High Grades Fell Off Proportionately This Year. Cumulative Production Record Still Stands

By James McIntyre

Of pools or fields producing an average of 15,000 bbls. a day there were 33 in the United States in the month of June, and these fields produced an average of 1,459,970 bbls. of the total of 2,194,972 bbls. per day produced in all the fields of the country, or 66.5 per cent of the whole.

The largest field in June was Smackover, Arkansas, which is credited with 265,275 bbls. a day of heavy oil and 29,057 bbls. a day of refinable crude, a total of 294,332 bbls. The only field added to the major pool list in June was Wewoka, in Seminole County, Oklahoma, which yielded an average of 18,761 bbls. a day during that month.

There were 29,000 producing wells in the 33 major pools and the average production of these was 50.3 bbls. per day. The highest single pool average was that of Inglewood, California, where 83 wells averaged 754.3 bbls. per day per well. The lowest average was in the Electra Field in Wichita County, Texas, where 2,648 wells averaged 6.5 bbls. per day. Since January 1, Rosecrans, Ventura-Newhall and Inglewood, California; Wewoka, Oklahoma; Big Lake, West Central Texas, and South Liberty, in the Gulf Coast fields of Texas, have entered the list and Hewitt, Oklahoma, has been dropped, as its production has fallen just below the 15,000-bbl. mark.

Considering the fields in the major list in June and the same fields in January there is a marked difference in the distribution of the production by gravity. Only one field, Tonkawa, in the major list produces oil higher than 40 gravity, and that field had fallen from 96,334 bbls. in January to 59,130 bbls. in June. In January, Tonkawa produced 7.6 per cent of all the oil produced by the then major fields. In June it produced only 4.1 per cent. In the accompanying list it is credited with a percentage of 7.6 per cent of all the crude produced by the major pools in January that are still in the list in June. Hewitt having been dropped, its January production is not considered in the new percentage list given in this compilation.

In January the predominating grades were 38-39.9 which produced 20.5 per cent of the total, and 24-25.9, which produced 19.5 per cent. In the June list the oils below 22 gravity represented 27.9 per cent of the June major pool production, while the leading grade in January, 38-39.9, fell to 16.6 per cent, and the 22-23.9 grade to 16.4 per cent.

Aside from Smackover, which has been a major field for years, the most sensational increase in production was in the Inglewood Field in California.

Ups and Downs of Production

The accompanying table shows the ups and downs of production in the major fields for the first six months of the year, and the secondary table shows the variations in the production of crude oil in the big fields between January and June. It brings out in bold relief the very considerable drop in the production of the refinable crudes, nearly all the high grade oils having suffered in this respect, while the crudes below 22 gravity increased from 114,631 bbls. to 407,901 bbls. per day, or about 256 per cent. Smackover, Inglewood and South Liberty were responsible for this increase. There is a certain amount of refinable crude in the Inglewood production, but in June this oil was largely offset by the inclusion of Luling crude in the higher grades, the latter oil not being fit for straight refining processes, notwithstanding its gravity.

Another table at the bottom of this page shows the trend of production for 12-month periods for several years. It brings out the fact that notwithstanding the enormous yield of several fields in the first half of 1925, which resulted in record-breaking production figures the total production for the 12 months ending June 30, 1925, was considerably below the production for 12 months registered in times past. The United States did not produce as much crude for the 12 months closing June 30 as it did in the 12 months ending in any month in 1924 earlier than August. The following tabulation will bring this out, as it gives the total production in round numbers, for the 12 months ending with the date named:

Production for 12 Months Ending	Bbls.
January 31, 1924	742,872,000
February 28, 1924	748,630,000
March 31, 1924	752,464,000
April 30, 1924	752,294,000
May 31, 1924	752,220,000
June 30, 1924	750,470,000
July 31, 1924	745,074,000
August 31, 1924	740,359,000
June 30, 1925	739,185,000

Big fields of California, Oklahoma and Texas, all producing gasoline crude, and now in the decline, were responsible for the tremendous 12-months totals last year, while the 12 months ending June 30 of this year saw the pendulum swing from the high grade to the low grade crudes in the last 6 months. All records for 12-month production may be broken before the year is up unless the Blossom sand at Smackover is a disappointment and the prospective fields in Oklahoma fail to come up to their expected size, but the output of the first six months of the year was not sufficient to make a dent in the records of the past, which was one of several reasons for the firmness of the general crude structure this year.

PRODUCTION OF THE MAJOR POOLS OF THE UNITED STATES

	January Barrels	February Barrels	March Barrels	April Barrels	May Barrels	June Barrels	Wells in June	Av. Prod. per Well in June	Av. Grav. of Oil
California—									
Midway-Sunset	105,918	104,143	102,719	101,992	103,645	102,282	2,931	34.9	22.5
Long Beach	122,297	118,503	117,114	112,382	108,928	107,247	651	193.9	25.0
Santa Fe Springs	49,554	50,140	49,996	52,262	52,767	53,077	353	150.5	33.5
Huntington Beach	41,673	40,909	42,695	42,212	42,020	43,848	330	132.9	23.0
Torrance	41,788	41,435	38,972	38,417	36,804	36,924	603	61.0	22.0
Elk Hills	37,019	37,738	37,896	37,626	38,496	35,705	216	165.3	22.0
Coyote	20,242	19,711	20,232	20,361	21,085	20,836	232	89.8	23.0
Kern River	17,783	17,848	17,376	17,854	17,607	17,624	2,178	8.1	14.0
Rosecrans	.....	.....	17,074	18,117	19,845	22,335	64	349.0	38.3
Ventura-Newhall	.....	20,550	20,469	21,578	24,461	22,402	588	38.1	28.0
Coalinga	22,402	22,538	22,139	21,640	21,376	20,906	1,102	20.8	16.0
Dominguez	56,982	51,075	48,692	45,195	36,958	32,032	56	572.0	31.5
Inglewood	.....	.....	.....	.....	18,826	62,605	83	754.3	19.5
Montebello	19,428	19,284	18,513	18,874	18,742	18,869	158	119.4	24.0
Wyoming—									
Salt Creek	56,166	66,805	56,757	58,998	54,921	52,877	1,518	34.8	37.0
Oklahoma—									
Burbank	58,644	56,965	56,422	59,034	56,862	57,611	1,755	32.8	37.5
Bristow	28,153	28,014	26,115	25,935	28,116	28,110	1,045	26.9	34.0
Tonkawa	96,334	91,216	77,962	70,856	62,448	59,130	771	76.7	42.0
Cushing	23,367	22,983	21,899	21,584	21,333	21,417	2,446	8.8	38.0
Healdton	16,548	15,199	16,262	16,201	15,493	16,417	1,910	8.1	30.0
Cromwell	33,147	37,486	32,610	42,866	40,750	37,055	388	95.5	38.5
Papoose	35,257	36,507	29,260	25,142	22,943	19,268	187	103.0	38.5
Wewoka	.....	.....	.....	.....	.....	18,761	136	137.9	38.5
Texas—									
Powell	59,301	55,870	55,077	51,332	49,676	49,119	789	62.3	37.0
Mexia	20,439	21,933	20,986	19,230	19,836	19,413	443	43.8	36.0
Wortham	113,336	72,964	73,706	58,998	48,188	37,649	315	119.2	39.0
Electra	17,587	17,238	17,318	17,158	16,908	17,328	2,648	6.5	38.5
Big Lake	.....	.....	.....	16,799	19,820	30,085	32	939.2	38.5
Luling	30,720	31,933	29,300	29,403	28,452	26,409	403	65.5	29.0
Holliday, Archer County	36,298	41,218	41,607	39,649	38,237	37,946	1,873	20.2	39.0
Hull	15,399	15,488	22,619	28,329	25,399	21,262	241	92.4	20.0
South Liberty	.....	.....	.....	.....	21,651	20,229	94	215.4	20.0
Arkansas—									
Smackover light	32,735	32,757	32,002	30,776	29,930	29,057	870	33.4	27.0
Smackover heavy	59,047	58,236	70,125	208,411	338,789	265,275	1,692	150.9	21.5
Total	1,266,564	1,246,676	1,232,025	1,368,211	1,501,312	1,459,970	29,000	50.3	

DISTRIBUTION BY GRADES OF THE OIL PRODUCED IN MAJOR POOLS IN JANUARY AND JUNE, 1925

Grades:	January	June	Per Cent— Jan.	June
40 and above	96,334	59,130	7.6	4.1
38 to 39.9	258,992	241,704	20.5	16.6
36 to 37.9	194,550	179,020	15.4	12.3
34 to 35.9	28,153	28,110	2.2	1.9
32 to 33.9	49,554	53,077	3.9	3.6
30 to 31.9	72,530	47,449	5.7	3.3
28 to 29.9	30,720	48,811	2.4	3.3
26 to 27.9	32,736	29,057	2.5	2.0
24 to 25.9	141,725	126,116	11.2	9.7
22 to 23.9	246,640	239,596	19.5	16.4
Below 22	114,631	407,901	9.1	27.9
Total	1,266,564	1,459,970		

ARIZONA'S CHICKEN FARM WELL

Well drilled with post hole digger in chicken yard at Wilcox, Cochise County, Arizona. pumps 5 to 7 barrels a week, oil selling for $5 per barrel.

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES BY MONTH SINCE 1920 AND PRODUCTION AT END OF EACH MONTH FOR THE 12 MONTHS JUST PASSED

Month—	1920 Production for Month	1920 Production for Past 12 Mos.	1921 Production for Month	1921 Production for Past 12 Mos.	1922 Production for Month	1922 Production for 12 Mos.	1923 Production for Month	1923 Production for Past 12 Mos.	1924 Production for Month	1924 Production for Past 12 Mos.	1925 Production for Month	1925 Product'n for Past 12 Mos.
January	34,008,000	383,540,000	38,138,000	447,059,000	43,696,000	477,741,000	54,636,000	568,471,000	58,629,000	742,872,000	61,263,000	723,367,000
February	33,193,000	390,184,000	35,524,000	449,390,000	41,314,000	483,531,000	49,958,000	577,116,000	55,716,000	748,630,000	54,609,000	722,260,000
March	36,171,000	396,403,000	41,105,000	454,324,000	47,188,000	489,614,000	57,329,000	587,256,000	61,163,000	752,464,000	60,290,000	721,387,000
April	34,945,000	401,720,000	40,232,000	459,642,000	45,167,000	494,548,000	58,344,000	600,433,000	58,174,000	752,294,000	62,827,000	726,040,000
May	36,622,000	407,755,000	42,189,000	465,179,000	47,002,000	499,361,000	61,624,000	615,055,000	61,550,000	752,220,000	69,634,000	734,124,000
June	36,663,000	413,540,000	40,548,000	469,064,000	46,087,000	504,900,000	62,538,000	631,506,000	60,788,000	750,470,000	65,849,000	739,185,000
July	37,745,000	417,256,000	40,461,000	471,775,000	47,134,000	511,572,000	68,005,000	652,377,000	62,609,000	745,074,000	.....	.....
August	38,906,000	422,559,000	41,109,000	473,982,000	47,059,000	517,523,000	67,977,000	673,295,000	63,262,000	740,359,000	.....	.....
September	37,521,000	426,187,000	36,763,000	473,224,000	45,805,000	526,565,000	66,473,000	693,963,000	60,640,000	734,526,000	.....	.....
October	39,584,000	431,557,000	35,832,000	469,472,000	48,410,000	539,143,000	67,783,000	713,336,000	60,809,000	727,552,000	.....	.....
November	38,609,000	437,140,000	38,108,000	468,971,000	48,027,000	549,062,000	65,278,000	730,587,000	58,207,000	720,481,000	.....	.....
December	38,961,000	442,929,000	42,173,000	472,183,000	50,642,000	557,531,000	58,932,000	738,879,000	59,184,000	720,733,000	.....	.....
Total 12 months	442,929,000		472,183,000		557,531,000		738,879,000		720,733,000			

*Estimated.

Discussing Curtailmemt Not Illegal

Opinion, Based on Supreme Court Decision, That Oil Association May Discuss Reduction of Runs if no Agreement Is Made

By L. M. Fanning

Possibility of an oil association calling a meeting to discuss the present gasoline situation is reported, as a result of evidence of over-refining in the latest available statistics. Because of legal angles there would doubtless be no attempt at concerted action for curtailment of runs, should such a meeting be held, but, as the most recent court decisions are interpreted, it is believed the association has every right to meet and discuss the information and statistics bearing on the situation. Members on their own initiative, can curtail in their individual plants if they believe the situation justifies, and are well within their rights provided no agreement is entered into in taking such action, according to opinion expressed to the writer by one qualified to advise on this question.

The legal permissibility of a trade association to meet for such discussion is plainly stated in the recent decision of the Supreme Court of the United States in the Maple Flooring Manufacturing Association case. In the last paragraph of the decision, the court decided that associations which meet and discuss statistics "without reaching or attempting to reach any agreement or any concerted action with respect to price or production or restraining competition, do not thereby engage in unlawful restraint of commerce."

In the same case the court says: "It is not, we think, open to question that the dissemination of pertinent information concerning any trade or business tends to stabilize that trade or business and to produce uniformity of price and trade practice. Exchange of price quotations of market commodities tends to produce uniformity of prices in the markets of the world. Knowledge of the available merchandise tends to prevent over-production and to avoid the economic disturbances produced by business crises resulting from over-production. But the natural effect of the acquisition of wider and more scientific knowledge of business conditions on the minds of the individuals engaged in commerce and its consequent effect in stabilizing production and price can hardly be deemed a restraint of commerce or, if so, it cannot, we think, be said to be an unreasonable restraint, or in any respect unlawful."

Might Save Market

In the present situation, as it particularly affects the western refiners which apparently are in a position where it is of vital concern to themselves and to the entire industry to know whether they are over-refining, a complete survey and an exhaustive discussion might prove beneficial, and it is understood that a meeting of the association is being advocated in some quarters. On the other hand, opinion is held within the association membership that such a meeting might be misinterpreted, and further that no practical good could be accomplished. Whether a meeting is held or not, it is apparent that developments of the last few weeks—during which gasoline has become progressively softer—have aroused a good many individual refiners to the necessity of taking steps to guard against over-production of gasoline. It is believed there is still time to accomplish some good and to save the market from a bad break.

It is interesting to quote further from the maple flooring decision in connection with the present situation:

"It is the concensus of economists and of many of the most important agencies of government that the public interest is served by the gathering and dissemination, in the widest possible manner, of information with respect to the production and distribution, cost and prices in actual sales, of market commodities because the making available of such information tends to stabilize trade and industry, to produce fairer price levels and to avoid the waste which inevitably attends the unintelligent conduct of economic enterprise. Free competition means a free and open market among both buyers and sellers for the sale and distribution of commodities. Competition does not become less free merely because the conduct of commercial operations becomes more intelligent through the free distribution of knowledge of all the essential factors entering into the transaction. General knowledge that there is an accumulation of surplus of any market commodity would undoubtedly tend to diminish production, but the dissemination of that information cannot in itself be said to be restraint upon commerce in any legal sense.

"The manufacturer is free to produce, but prudence and business foresight based on that knowledge influences free choice in favor or more limited production. Restraint upon free competition begins when improper use is made of that information through any concerted action which operates to restrain the freedom of action of those who buy and sell.

No Ban on Intelligence

"It was not the purpose or the intent of the Sherman Anti-Trust Law to inhibit the intelligent conduct of business operations, nor do we conceive that its purpose was to suppress such influences as might affect the operations of interstate commerce through the application to them of the individual intelligence of those engaged in commerce, enlightened by accurate information as to the essential elements of the economics of a trade or business, however gathered or disseminated. Persons who unite in gathering and disseminating information in trade journals and statistical reports on industry; who gather and publish statistics as to the amount of production of commodities in interstate commerce and who report market prices are not engaged in unlawful conspiracies in restraint of trade merely because the ultimate result of their efforts may be to stabilize prices or limit production through a better understanding of economic laws and a more general ability to conform to them, for the simple reason that the Sherman Law neither repeals economic laws nor prohibits the gathering and dissemination of information. Sellers of any commodity who guide the daily conduct of their business on the basis of market reports would hardly be deemed to be conspirators engaged in restraint of interstate commerce. They would not be any the more so merely because they became stockholders in a corporation or joint owners of a trade journal, engaged in the business of compiling and publishing such reports.

"We do not conceive that the members of trade associations become such conspirators merely because they gather and disseminate information, such as is here complained of, bearing on the business in which they are engaged and make use of it in the management and control of their individual businesses; nor do we think that the proper application of the principles of decision of Eastern States Retail Lumber Association vs. United States or American Column & Lumber Co. vs. United States or United States vs. American Linseed Oil Co. leads to any such result. The court held that the defendants in those cases were engaged in conspiracies against interstate trade and commerce because it was found that the character of the information which had been gathered and the use which was made of it led irresistibly to the conclusion that they had resulted, or would necessarily result, in a concerted effort of the defendants to curtail production or raise prices of commodities shipped in interstate commerce. The unlawfulness of the combination arose not from the fact that the defendants had effected a combination to gather and disseminate information, but from the fact that the court inferred from the peculiar circumstances of each case that concerted action had resulted or would necessarily result in tending arbitrarily to lessen production or increase prices.

No Such Inference

"Viewed in this light, can it be said in the present case, that the character of the information gathered by the defendants, or the use which is being made of it, leads to any necessary inference that the defendants either have made or will make any different or other use of it than would normally be made if like statistics were published in a trade journal or were published by the Department of Commerce, to which all the gathered statistics are made available. The cost of production, prompt information as to the cost of transportation, are legitimate subjects of inquiry and knowledge in any industry. So likewise is the production of the commodity in that industry the aggregate surplus stock and the prices at which the commodity has actually been sold in the usual course of business.

"We realize that such information gathered and disseminated among the members of a trade or business may be the basis of agreement or concerted action to lessen production arbitrarily or to raise prices beyond the levels of production and price which would prevail if no such agreement or concerted action ensued, and those engaged in commerce were left free to base individual initiative on full information of the essential elements of their business. Such concerted action constitutes a restraint of commerce and is illegal and may be enjoined as may any other combination or activity necessarily resulting in such concerted action as was the subject of consideration in American Column & Lumber Co. vs. United States, supra and United States vs. American Linseed Oil Co., supra. But in the absence of proof of such agreement or concerted action having been actually reached or actually attempted, under the present plan of operation of defendants we can find no basis in the gathering and dissemination of such information by them or in their activities under their present organization for the inference that such concerted action will necessarily result within the rule laid down in those cases.

"We decide only that trade associations or combinations of persons or corporations which openly and fairly gather and disseminate information as to the cost of their products, the volume of production, the actual price which the product has brought in past transactions, stocks of merchandise on hand, approximate cost of transportation from the principal point of shipment to the points of consumption as did these defendants and who, as they did, meet and discuss such information and statistics without however reaching or attempting to reach any agreement or any concerted action with respect to prices or production or restraining competition, do not thereby engage in unlawful restraint of commerce."

BRADFORD'S SONS HAVE BEGUN THE TREK FOR OLD HOME WEEK

By James McIntyre

BRADFORD

Bradford! Little City 'midst the hills,
Bradford! Memories of a thousand thrills,
Rich in romance, song and story
Mirror still old Bradford's glory.
Eternal City of the craft
Of men who, win or lose, still laugh.
Whose hearts are young, who flaunt the years,
Remember joys and discard tears.

Dear old Bradford, though we roam,
Yet we think of you as home,
Mother of the mystic game,
Sons of Bradford speak your fame
In each far corner of the earth,
And, if not all of yours by birth
Why, just an hour of Bradford's lure,
Makes one a Bradford Son for sure.

Could I but listen to each tale,
With foaming mug and foot on rail,
Please keep this quiet as a mouse,
But I'd walk to the Option House
From Tulsa, though my feet were sore,
To be with the old crowd once more,
To hear their tales and they hear mine—
"Set 'em up again—that last was fine."

Miss Tulsa comes 'cross mount and plain,
I'm telling you that Pullman train
Can't run too fast, Lord bless your soul,
Pull throttle wide and let her roll,
And fireman, keep on heaving coal,
For Bradford, Bradford is our goal.
Eternal City of the craft
Of men who, win or lose, still laugh.

CHARLES F. DORAN,
Tulsa, Okla.

Charley Doran has hit the spot. He never lived in Bradford, having entered the oil business as a boy in Lima, Ohio, when John O'Brien, Fred Hillman, Joe Harding, Greeley Morrow, Martin Moran, Tom Seward, Will Robinson and other telegraph operators, bookkeepers, gaugers, etc., in the employ of the United Pipe Line division of the National Transit Co. at Bradford, were being made superintendent of this and chief of that for the Standard in the then booming Ohio fields. But Mr. Doran was in Bradford "just one hour" later in life—long enough to gain inspiration for a poem written 25 years afterwards.

Bradford will celebrate the one-hundredth anniversary of the settlement of the Tuna Valley and the fiftieth anniversary of the opening of the Bradford oil field on August 9 to 15 this year, and its sons and daughters scattered over the earth are all invited to, and many of them will take part in the festivities attendant upon the celebration. It will be a Home Coming Week extraordinary, put on as only Bradford can stage a celebration. Every day in the week will be a feature day and the whole week will be a renewal of old friendships on a magnificent scale.

The Tulsa Special

The largest contributor to the crowd of old homers will be Oklahoma, where in every oil field are former residents of the old Pennsylvania oil metropolis. Many have already departed in automobiles and more will go later by rail. A solid train of Pullman coaches, a special train de luxe, will leave Tulsa on Saturday, August 8, on the Frisco lines to Chicago and thence over the Erie to Bradford, arriving in the old home town at 9 a. m. on Monday, August 10. In addition to former Bradfordites the passengers on the special train will include some of Tulsa's leading bankers, oil men and others who have never been in Bradford, but who have had Bradford dinned into their ears so much since oil was

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More Intelligent Selling of Oil Products

Importance of Marketing Division of the Industry and Its Contact With Consumers on Demand and Prices

By N. O. Fanning

NEW YORK, Aug. 3.—"More Intelligent Selling" should be the motto of the oil business. Production, refining, transportation, comprise branches of the industry which are absolutely essential, a work that must be done in order to keep the industry alive, but it is in the selling that the keen competition of individual intelligence has full sway—where every little move counts, and where little advantages or mistakes can make or break a whole organization.

Quoting from an article by T. J. Williams on "The Problems of Marketing" in the "Lamp," published by the Standard Oil Co. of New Jersey:

"If the marketing organization would cease to function, neither producers nor refiners could keep on with their work, for lack of revenue . . . . The part played by the marketing division in the general scheme (of an oil organization) is complex as well as important. For it is the marketing division that opens and keeps open the channels of trade through which flow in a steady stream the product of the refinery and manufacturing divisions. It is the marketing division which is constantly engaged in the extension of old markets and the discovery of new ones. It is the marketing division which, by direct sales effort linked up with advertising, both creates a demand for the products and sees to it that the demand is satisfied . . . When one considers that the products of petroleum are used in one form or another by every individual, some idea of the extent of the marketing organization in the oil industry is apparent."

Each separate product has a bearing, although slight, upon the growth of the oil business, and the manner in which it is marketed decides whether that product will or will not be used by the general public in preference to a competitive one.

Import of Sales Efficiency

The permanency and success of the oil business depends upon consumption; consumption can be encouraged or discouraged by an intelligent or unintelligent sales policy. The sales policy as determined by the sales department must be applied to men in keen competition with other salesmen. In this field, therefore, the real test of the oil business takes place. The sales department forms the "personal contact" between the oil business and the public. This personal contact can be supplemented, of course, through advertising.

It is not going too far to say that the attitude of the public as expressed by votes at national and state, as well as municipal, elections, can be influenced in favor of the oil business by means of "intelligent selling." Fair dealing in day-to-day transactions often means more to the harassed consumer than articles appearing in the press, although the latter are also important.

Although efforts have been made—notably through "The Oil Industry's Answer"—to form an intelligent contact between the oil industry and the public, the element of personal contact, it is believed, has been given too little consideration by the petroleum companies. One unusual opportunity for personal service through the sales department, for instance, lies in the marketing of gasoline through service stations, a larger number of which are being operated by the petroleum refiners themselves. This will be discussed later under the heading of "gasoline."

That the sales department is the real determiner of prices in the oil industry is a fact which is so unrecognized that few honestly believe it so. It must be remembered, however, that the oil business would not exist if the public did not want to use oil. The fact that petroleum is an "essential commodity"—that civilized progress would cease were the supply of petroleum to stop today—has promoted the idea among many that the oil business has the public where it wants it and can do as it pleases.

Leading oil men know, on the contrary, that the oil business lives "by sufferance" of the consumer, just as every other business does. Put the retail price of gasoline up to $1 per gallon, and other products accordingly, and see what will happen. Very few will deny that substitutes for petroleum in its various uses would soon be flooding the markets.

Getting back to the subject of prices, the price depends upon what the public is willing to pay for the commodity in competition with other products which could be similarly used. That the selling department, through its contact with the public, knows what that price is, puts it practically in a position to dictate to the other departments what the product must be produced for in order to assure a continuance of all branches of the business. In other words, the sales department is the public's representative in the oil organization. Sales department heads know that the salesman showing the best results is the one who gets the best consideration at the hands of his organization. This is the real working of what has just been said. Public approval of a product assures its continued use.

When prices of oil become too high or too low, due to a shortage or oversupply, stability of the entire industry is threatened. Sales efficiency can often "put over" a product at a price which is satisfactory to the public and also justifies its manufacture, where inefficiency could not do it. The price can be advanced, to a certain extent, to a degree in proportion to the sales efficiency. Prices must be reduced when sales ability fails and the reductions are communicated to other branches of the industry.

Proof that sales efficiency is all-important in the oil business lies in the known fact that the greatest degree of success has been attained by the petroleum companies having highly efficient sales organizations. Name the 10 largest and richest oil companies of the United States and you will name the 10 largest marketers of petroleum products.

Several phases of "selling efficiency" can be discussed with relation to the more important products of crude petroleum:

Gasoline

The relationship between the petroleum industry and the consumer is more close with reference to gasoline than to any other petroleum product. In the United States there is an automobile for every six persons. Automobile users are in touch with gasoline retailers practically every day in the year, and the cost of gasoline is as important to them as other most essential daily requirements. As a rule when the average voter thinks of oil, he or she unconsciously thinks of it in terms of gasoline. The "gas" station is constantly within sight of the average autoist in his ordinary travels. These are reasons why salesmanship in respect to this product has the twofold duty of intelligent selling and "missionary work," by which is meant the cementing of friendly relations between the oil industry and the public.

The gain in consumption of gasoline has been so rapid in recent years that the oil industry perhaps cannot be blamed for the haphazard methods often used in selling this product. Perhaps there is no better means than those commonly employed. But could this method not be "refined" to the advantage both of the oil industry and the consumer?

Many marketers of gasoline claim that there is a great need in emphasizing quality in gasoline, not by the use of adjectives of general significance, but by getting the factor of quality down to a scientific basis, so that the consumer could know quite easily what grade of gasoline is being sold. Irregularity in quality of gasoline sold is reflected in price divergences at service stations in almost any territory in the United States.

Quality in gasoline can be emphasized, as it is in many cases, by several methods. Among them can be mentioned:

Use of trade names, or "brands."

Advertising.

The oil business could possibly agree upon specifications for gasoline for various requirements, which specifications would come to be recognized by the consumer.

The oil business should work to eliminate disagreeable odors connected with the use of gasoline. These odors have proved a handicap to motorists in districts where traffic is unusually congested—that is, where the use of cars is most prevalent.

Perhaps all of these methods of emphasizing or improving quality in gasoline do not come under the head of "selling," but they are so intimately connected with the problem of selling that they can be considered with it.

The gasoline service station is a problem in itself. To improve the quality of selling the gasoline station itself must be improved. The number, location and appearance of service stations are all-important factors. In the haste to put their products before the consumer many occurred to them to learn the facts for these factors. The result is that in many localities there are patently too many stations; in others many stations are put up without regard to appearance or the service rendered by them.

In the service given at service stations lies the keynote of intelligent selling of gasoline. Many gasoline brands are widely advertised but they often fall into the hands of retailers who neither know nor care about the product. Some companies, in all fairness to them, have emphasized service and all credit is due them as pioneers in recognizing the value of putting their product over by intelligent men in an intelligent manner. But their number is too small.

The Oil and Gas Journal has made a survey to test the knowledge service station operators and attendants have of gasoline, quality and prices. The results indicate that at least three out of every four either admit complete ignorance or are entirely misinformed, it never having occurred to them to learn the facts for the purpose of passing them on to their customers. In other words, at the precise point of contact, intelligent salesmanship in the majority of cases is absolutely missing.

Lubricating Oil

Selling of lubricating oils is a much more complicated proposition than is that of gasoline. There are at least 200 varieties of lubricating oils covering the

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SALE OF STOCK BY EMPLOYES DEFEATS PURPOSE OF PROFIT SHARING PLAN

HOUSTON, Tex., July 27.—Amos L. Beaty, president of The Texas Co., has an article in the current issue of the Texaco Star, house organ of the company, dealing with stock allotments to employes and the tendency of some employes to dispose of the shares and thus defeat the object of the profit-sharing plan.

No doubt the experience of The Texas Co. is the same as other corporations engaged in the petroleum business and therefore Mr. Beaty's article is of general interest. Mr. Beaty says an examination of the stock list discloses the fact that a "disappointing number" of employes have sold their stock certificates and the object of the plan is defeated. He says one of the definite purposes of the profit-sharing method in vogue by practically all large corporations is the "creation of a direct interest in the business, thus furnishing an incentive to greater effort."

Mr. Beaty credits the adoption of the plan with building up a spirit of loyalty to the company, which has been reflected in earnings, which in turn has benefitted stockholders.

His letter follows:

Mr. Beaty's Letter

Our plan for the sale of stock to employes has definite purposes. One is the encouragement of thrift and savings. Another, the more important of the two from the standpoint of the company, is the creation of a direct interest in the business, thus furnishing an incentive to greater effort. There can be no doubt that the plan is sound in principle, and good results can be seen in our record. It is fair to attribute some of the success which the company has achieved to the operation of the plan, meaning that the plan has been a factor in building up that splendid loyalty which has characterized the relations of employes to the company, which has been reflected in earnings, which in turn have benefitted stockholding employes.

But there is an aspect of the matter which must be considered by the board of directors at some near future date, namely, the inclination of some employes to sell their stock as soon as certificates are obtained. When the employe parts with his stock the chief purpose of the plan is defeated. To be sure, when stock is paid for it becomes the property of the holder, with all the incidents of property, including the right to sell or otherwise dispose of it at will; otherwise it would not have full value. But that is not the point. Perfect and unqualified ownership is one thing, and a willingness to terminate that ownership is another. A study of our stock lists during the time the plan has been in effect discloses a disappointing number of employes who have not held their stock. Some who have received allotments have ceased entirely to be stockholders, while others hold much less than they received. There are, to be sure, some who have never sold any stock and who now have more than all shares ever allotted to them, but they are in minority. It would seem reasonable to expect that employes, knowing much if not all there is to know about the company, would not only hold all the stock acquired under the plan,

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Name Folsom to Represent Petroleum

Former Federal Oil Director of California Appointed on Advisory Committee on the Reorganization of Bureau of Mines Work

By Charles E. Kern

WASHINGTON, D. C., Aug. 3.—The meeting of the advisory committee on industry to recommend to the Secretary of Commerce plans for the reorganization, or realignment of the work of the United States Bureau of Mines, Department of Commerce, will afford an excellent opportunity for the petroleum industry to promote the activities of the Government for the advancement of its interests generally and especially along the line of scientific research.

Secretary Hoover has given this advisory committee broad powers in the making of recommendations for the realignment of its work with that of other bureaus of his department which probably will include the Bureau of Standards, Bureau of Foreign and Domestic Commerce and Census Bureau, all of which overlap in one way or another in their activities. So far as the work of realigning the duties of these bureaus is concerned, the committee will be occupied with purely administrative questions, preventing duplication, and determining what arrangement will prove most efficient. For instance, statistical work relating to production of oil and to the refining industry is now under the Bureau of Mines and as the Census Bureau is especially and wholly engaged in statistical work, the question arises as to the propriety of passing to that bureau all statistical matters that may arise in the Department of Commerce. The other side of this problem is whether the general familiarity of a bureau engaged in various studies relating to oil does not make more convenient and appropriate the location of statistics on that subject under the same direction that is dealing with the other problems.

The Bureau of Standards and the Bureau of Mines, in their research work, run along lines that have great similarity and the committee will determine whether these lines do converge at certain places and if so, which bureau should, with the greatest propriety take entire charge of each particular class of investigations.

Oil Industry to Be Heard

All industries that are affected by the work of any of these bureaus are being invited to come forward with suggestions that may be helpful to the advisory committee, not only for the purpose of improving the administrative aspects of the department's work, but also to guide that work along channels that may more greatly serve industry in the future than it has in the past. Right here is an excellent opening for the oil industry to make itself felt not only for its own good but for the welfare of the country at large. If the oil industry is interested in scientific research and wishes additional effort in that direction, now is the time for formulating ideas to place before the committee. It is perfectly well known that Director George Otis Smith of the Geological Survey; former Director H. Foster Bain, of the Bureau of Mines and now director of the Bureau of Standards, have gone on record in respect to many unknown problems that ought to be solved in the general interest of industry, not only as they relate to oil production and refining, but also as they affect the industries that are dependent upon these products. Former Director Van H. Manning, of the Bureau of Mines, published a list of 100 problems relating to petroleum that he hoped to have investigated and all of them were as susceptible to definite scientific determination as other problems that have been solved in that way. Now is the time for all people who believe as do these especially well qualified judges on this subject to come forward and present their case.

Secretary Hoover is known to hold strongly to the idea that science is the hand maiden of industry and has an understanding and sympathy with all such efforts that make him an especially desirable Secretary of Commerce to deal with. He now wishes the oil and other industries to come to the department with suggestions as to how it can best serve them and bring the Bureau of Mines into their problems.

To Represent Petroleum

As an evidence that the oil industry will be heard in this discussion is the appointment as a member of the advisory committee of D. M. Folsom, representing the American Petroleum Institute. Mr. Folsom is a member of the General Petroleum Corp. and makes his home in California.

There are six members of this committee. J. V. W. Reynders, president of the American Institute of Mining and Metallurgical Engineers, with headquarters in New York City, is the chairman of the committee. Other members besides the chairman and Mr. Folsom are L. S. Cates, of Salt Lake City, Utha, president of the American Mining Congress. Mr. Cates has asked the Secretary of Commerce to name J. F. Callbreath of this city and an official of the American Mining Congress as his alternate for service on the committee; J. G. Bradley, president of the National Coal Association and president of the Elk River Coal & Lumber Co., with headquarters at Dundon, W. Va.; Philip Murray, vice president of the United Mine Workers of America with headquarters at Pittsburgh, Pa., representing union labor in the coal mining and Metallurgical Engineers, with headquarters at New York City. Secretary Hoover made a personal selection in naming Mr. Bain as a member of this committee, desiring him to serve because of his thorough knowledge of the working and organization of the Bureau of Mines. C. P. White, head of the coal division of the Department of Commerce, was named as secretary of the advisory committee.

D. M. Folsom

Plan Early Meeting

It is planned to have the first meeting of this committee August 6, before the return of Secretary Hoover to this city to enable the committee to organize and study the problems before them and get the work started. Secretary Hoover is now in California on a vacation and is expected to return soon.

Various officials of the bureaus to be affected by the committee's recommendations will be called into conference as well as representatives of industries. Sub-committees probably will be named to report on particular subjects.

It is well known that President Coolidge is in thorough accord with this work of reorganization. It was by executive order that portions of the work being done under the Interior Department were assigned to the Department of Commerce. The joint committee of Congress framed a bill for a general reorganization of the administrative branch of the Government under the administration of President Harding. Walter F. Brown of Ohio, was chairman of this committee and acted as the representative of the President. The vice chairman was Senator Smoot of Utah, other members being Senator Wadsworth of New York, Senator Harrison of Mississippi, Representatives Mapes of Michigan, Temple of Pennsylvania and Moore of Virginia. This joint committee framed a legislative bill which is acceptible to President Coolidge and barely failed of passage by the last Congress and will come up for action next December.

PRESIDENT'S OIL BOARD CLOSES INQUIRY ON PETROLEUM PROBLEMS

WASHINGTON, D. C., July 31.—The President's oil board, which has been making an exhaustive inquiry into the nation's petroleum problems with a view to devising a national policy for greater conservation of the country's oil reserves, and more efficient methods of production, distribution, refining, etc., has about completed the first phase of its program. Letters of inquiry, asking specific data, were directed to the heads of great oil corporations and others, and the material supplied the board is now in the process of condensation, and eventually this data will be incorporated into a concrete statement of fact which will disclose the precise conditions affecting the industry as evidenced by the industry itself.

More than 300 of the oil industry's most important leaders were appealed to by the Government for cooperation, advice and suggestion as to how a new or revised national policy might be inaugurated looking to a more common sense, economic and effective method of handling the present and future oil supply. Practically all of the corporation heads, scientists, engineers and oil experts addressed, replied promptly and with a frankness which indicated a wholesome spirit of cooperation with the Federal officials. A few company heads made no response; a small number expressed inability to reply to the technical questions propounded. A complete report has been compiled for the board, disclosing those who promptly replied, those who did not, and those who confessed frankly a lack of technical knowledge.

The board has informed the industry that no further replies probably can be considered after August 1, and those companies and corporations that have for the past several months refrained from responding to the Government's request for data, will be advised that the information now in hand seemingly meets the present requirements of the board. The reason for the board's action in closing the "questionnaire inquiry" on August 1, is that to delay the actual compilation of the pertinent oil facts until a later date possibly would preclude the board making a report to the President and Congress by the time Congress convenes in December, which is the present intention of the board. Sufficient time has elapsed, the board feels, since it dispatched its letters of inquiry, to enable all of the oil corporation heads and others to reach conclusions concerning the general petroleum situation. As the industry responded readily, however, with a few exceptions, it was felt that little additional good could be accomplished by delaying actual work on the final report in which the board will disclose to the President and Congress a series of facts which likely will be of inestimable benefit to both Government and industry.

Digesting the Facts

All of the replies received have been placed in the hands of the board's advisory committee, and these committeemen are at work digesting and otherwise epitomizing the facts set forth in order that the board may have before it a concrete expression of the industry relative to production conditions, refining problems, distribution elements, economic waste in production, refining, foreign exploration, possible substitute fuels, and other phases of petroleum conditions which enter into the stability and future of the industry. When this work is completed, the facts will be placed before the board so that the members, Secretaries Work, Hoover, Weeks and Wilbur, will be enabled to single out readily the cardinal principles involved and the outstanding problems confronting the country and the industry. A public hearing will then be held in Washington, to which will be invited the presidents of six or eight of the greatest oil corporations in America, and these, representative of the different

(Continued on Page 117)

Western Refining Co. Buys DeLendrecie and Henderson Interests

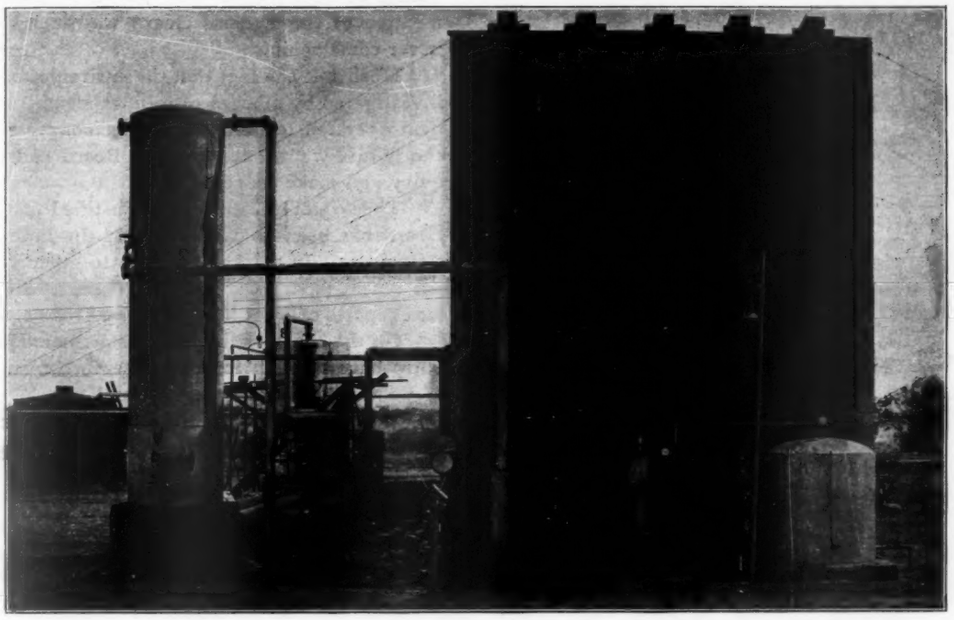
LOS ANGELES, Calif., Aug. 1.—Completion of the deal by which the Western Refining Co. purchased the assets of the Henderson Petroleum Corp. and the DeLendrecie Oil Well Trust was announced by W. C. Squiers, director of the sales for the former organization. Stockholders of the Western Refining Co. voted their approval yesterday afternoon. The purchase price is said to be $3,000,000.

The acquired properties include wells at Athens, Dominguez and Signal Hill in addition to acreage in the Ventura district.

The purchase means, he said, the completions of the company's 5,000-bbl. refinery at the harbor, the erection of cracking, asphaltum, lubricating, canning and boxing plants in addition to the building of wharfage in front of the refinery.

It also was voted at the stockholders meeting, Mr. Squiers said, to change the name of the organization to "The Western Oil & Refining Co."

NEWTON EQUIPMENT



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CONSERVATION INQUIRY NEARS END

The President's Federal Oil Conservation Board in announcing that no further replies probably will be considered to its questionnaire inquiry after August 1 pays a merited tribute to the oil industry which "replied promptly and with a frankness which indicated a wholesome spirit of cooperation with the Federal officials."

A few company heads made no response; a small number expressed inability to reply to the technical questions propounded, but this was to be expected in any inquiry of the kind addressed to any industry, explained by individual resentment of recurring investigations or by the belief that it would serve no good purpose anyway.

The vast bulk of the industry, however, took a different attitude. So different, in fact, that it led Secretary Work as chairman of the board to say: "There is just one thing that the public should know and that is that the oil industry, almost as a whole, has realized that this inquiry by the Federal Oil Conservation Board has been and will continue to be conducted with but one object in view—to arrive at a policy that will be helpful, stimulating, productive of lasting benefits to the Government and to the industry.

"The heads of practically all of the most important corporations have seen an opportunity to present to the board frank opinions and views, and I will say that these views are worthy and constructive, and the board values them and is appreciative of the spirit of helpfulness evidenced by these progressive leaders of a great industry.

"What has impressed the board most has been the constructive views and frankness of these captains of industry. They have been frank, to the point, logical, and have rendered a real service. When a great industry deals thus frankly with a Federal agency then, and then only, can beneficial and lasting results be accomplished."

When the President created the Federal Oil Conservation Board and it began sending out its questionnaires, The Oil and Gas Journal pointed out that, despite the danger of political misinterpretation, the opportunity for the industry to get its case before the Government and the people was too good to be neglected.

For the first time since the emergency of war the Government and the oil industry were to meet face to face in conference instead of across a counsel table in court or at a congressional investigation.

It was clear that the industry, conscious of the justice of its case, had nothing to fear from presenting it frankly, while the chance to have its side put squarely before the public through the medium of the Federal Board was such an opportunity as might never come again.

Meantime the fact that the entire petroleum situation was being investigated by a board of cabinet members appointed by the President operated to head off further congressional aggression against the industry until the Federal Board had time to conclude its inquiry and make its report.

The sequel has abundantly justified that view. The Conservation Board has been at pains to treat the industry fairly in its public statements. In marked contrast to other governmental agencies in the recent past it has not advertised itself by issuing sensationalized reports of what it expected to prove against the oil industry.

On the contrary, its public statements on the progress of its inquiry have been uniformly conservative, since the initial allegation of waste which was quickly abandoned.

With the announced closing of the questionnaire inquiry the board has further evidenced its sense of fairness to the industry by stating that a public hearing will be held in October to which will be invited the presidents of six or eight of the greatest oil corporations in America and these, "representative of the different branches of the industry, will be invited to discuss publicly their views and offer suggestions for the conservation or best use in the future of the nation's oil reserves."

The value of this hearing will be the opportunity it will afford for the discussion of the board's digest of the replies it has received to its questionnaires, only a few of which have been made public, and some of which may call for comment and criticism by the recognized leaders of the industry.

Being held on the eve of the assembling of Congress, which may be expected to make a lively interest in the report of the conservation board this hearing should be instructive to both Congress and the country.

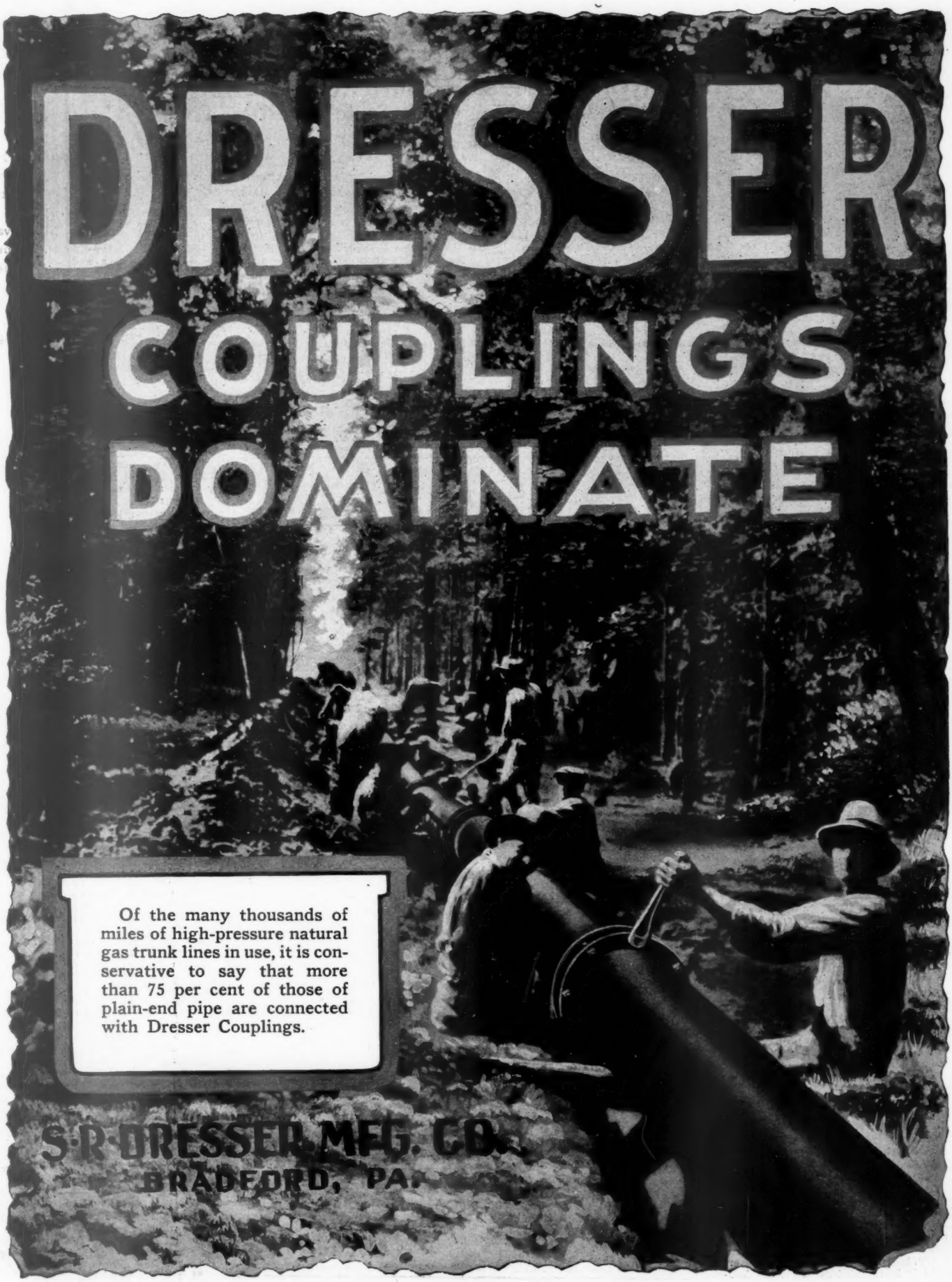
The need for such a hearing is further emphasized by the statement of the board that while the industry has been at work making a complete survey of conditions within its own sphere, the Government likewise has collected considerable data bearing upon its own responsibility in so far as it relates to the petroleum situation.

It is stated that the War Department, Navy Department, Shipping Board, Federal Trade Commission, Department of Justice and the Geological Survey have all cooperated with the board in its inquiry. It is not improbable that some of the theories advanced from this quarter may need to be combated vigorously by practical oil men.

The general counsel of the board, it is added, has exhaustively covered every legal aspect of the situation and this legal survey is expected by the board to be of material assistance to it in its effort to arrive at a definite and impartial conclusion as to what should or should not be done to enhance the interests of Government and industry.

The industry's legal advisers should also be consulted so that divergence of opinion, should it arise, may be thoroughly threshed out before the board is committed to its recommendations in this regard. Chairman Work's assurance that the whole inquiry, to be complete, fair and honest, cannot be rushed to a termination if the Government is to do proper justice to its task, is taken to mean that there will be no undue haste to shut out the fullest discussion.

The issues at stake are too great, too vital to the industry and to the country, to permit any other course. The recommendations of the Conservation Board, to be submitted to the President and Congress, must carry with them the evidence that they represent the considered judgment of the practical men in the industry as well as of the officials at Washington who, in the last analysis, being personally inexperienced in petroleum matters, must be expected to be guided to right conclusions on the technical issues involved.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Kentucky's 3 Development Stages

Veteran Oil Operator Presents Interesting Sidelights on Searching for and Producing Oil in State's Western Fields

By J. H. McClurkin

BOWLING GREEN, Ky., Aug. 3.—If a line were drawn from Toledo, Ohio, southward through Cincinnati, Lexington, Burkesville, Nashville, Jackson, Miss., and onwards towards the Gulf Coast of Texas and Mexico it will roughly indicate the location of the top of a great disturbance or upheaval of the earth's surface known to scientists as the "Cincinnati Arch" or "Uplift." Geologists tell us that millions of years ago when Mother Earth was cooling and her inwards were writhing and contorting like a boy with the stomach ache that parts of her outer surface were cooled before other parts and shrunk or expanded accordingly, and that along the line indicated a great upheaval pushed all the rocks in the vicinity apart and threw those rocks that lay far below upwards and out upon the surface and in general disturbed the natural repose of the rocks for many miles on each side. Extending at varying angles, little upheavals or arches run out from the main arch, making folds or wrinkles in the earth's surface and these little folds are thought to be responsible for the storage of oil in the underground reservoirs prepared for our use millions of years ago.

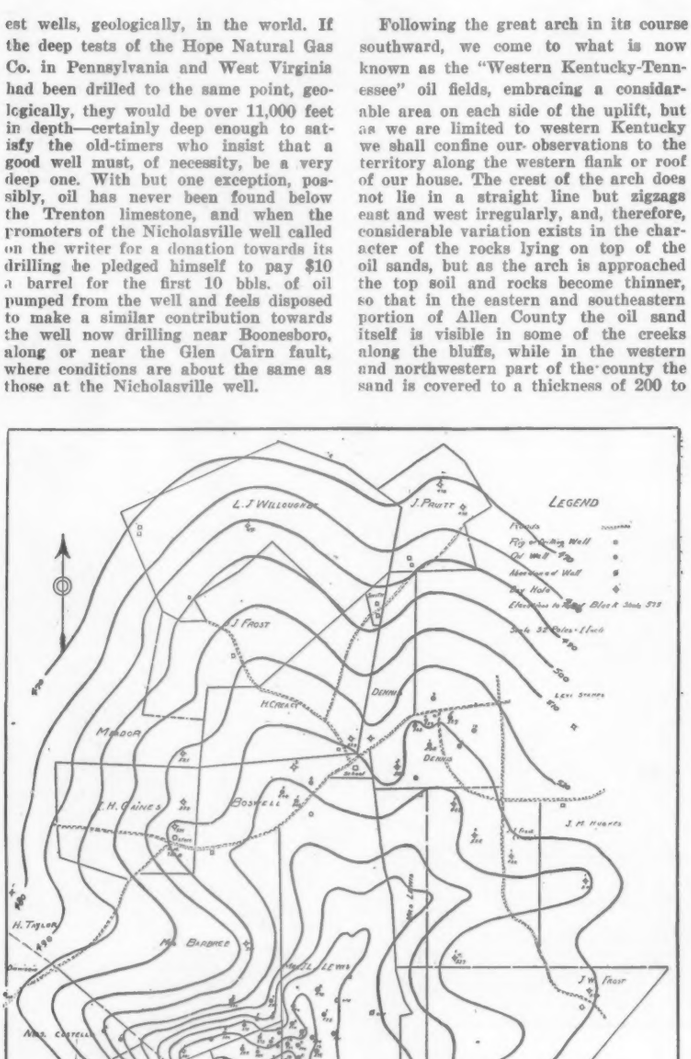
Perhaps a more vivid picture of the condition along this upheaval may be gained if we liken it to the rooftree or ridge pole of a house—on each side of the ridge pole the roof slopes gently towards the eaves, the shingles having their feather edge next the ridge pole and their thick ends farthest away from it. This is exactly what occurs along the arch or upheaval; the rocks on the east side dip gently towards the Appalachian system while those on the west side slope towards the Mississippi River. The beds of strata rock are very thin next the crest of the arch but gradually thicken as the distance from it increases just as the shingles thicken at the end farthest from the ridge pole. The Chattanooga black shale is about 30 feet thick in eastern Allen County while it is about 95 to 100 feet thick in northwestern Warren County.

If we imagine our ridge pole to be an old one with sags in numerous places and far above its level in others we will have a correct view of the top of the arch for it bobs up and down in a very irregular fashion, being much higher at Cincinnati, Lexington, Burkesville and Nashville than elsewhere. In Casey, Russell and Adair Counties it has sagged far below its normal level and new rocks have piled up so that its presence is scarcely discernable. The same conditions prevail in parts of Clay and Jackson Counties in Tennessee. In many localities the newer rocks have been washed completely away and the older rocks that should lie many hundreds of feet underground are visible. For instance, the Trenton limestone, which has been such a wonderful producer of oil in northern Ohio at about 1,500 feet, has been pushed up on top of the ground at Lexington, Ky. The oil sand at Irvine, Ky., 50 miles east of Lexington, is about 500 feet above the Trenton, showing that the Trenton has passed under ground and is covered by about 800 feet of earth at that point.

A Geologically Deep Well

A few years ago a wildcat well was drilled about 12 miles south of Lexington, near Nicholasville, spudding in in the Trenton limestone, which would have been about 800 feet under the Irvine sand had it not been washed away at that point. The drillers encountered sands galore but it was finally abandoned as a dry hole at 3,200 feet and may very probably be regarded as one of the deepest wells, geologically, in the world. If the deep tests of the Hope Natural Gas Co. in Pennsylvania and West Virginia had been drilled to the same point, geologically, they would be over 11,000 feet in depth—certainly deep enough to satisfy the old-timers who insist that a good well must, of necessity, be a very deep one. With but one exception, possibly, oil has never been found below the Trenton limestone, and when the promoters of the Nicholasville well called on the writer for a donation towards its drilling he pledged himself to pay $10 a barrel for the first 10 bbls. of oil pumped from the well and feels disposed to make a similar contribution towards the well now drilling near Boonesboro, along or near the Glen Cairn fault, where conditions are about the same as those at the Nicholasville well.

Following the great arch in its course southward, we come to what is now known as the "Western Kentucky-Tennessee" oil fields, embracing a considerable area on each side of the uplift, but as we are limited to western Kentucky we shall confine our observations to the territory along the western flank or roof of our house. The crest of the arch does not lie in a straight line but zigzags east and west irregularly, and, therefore, considerable variation exists in the character of the rocks lying on top of the oil sands, but as the arch is approached the top soil and rocks become thinner, so that in the eastern and southeastern portion of Allen County the oil sand itself is visible in some of the creeks along the bluffs, while in the western and northwestern part of the county the sand is covered to a thickness of 200 to 300 feet, and farther northwest, in Warren, the sand is covered to a depth of 800 to 1,300 feet and more.



It will be seen, therefore, that a well drilled close to the top of the crest of the arch in eastern Allen County will penetrate the same oil sand and obtain the same oil as a well drilled in western Warren County that finds the sand at 1,300 feet; same sand, same oil; only, in one place the drilling is at the top of the hill, geologically, while at the other place, it is at the bottom of the hill, geologically. This is the only difference between a "deep" and a shallow well in western Kentucky and unless this condition is borne in mind the old-time prejudice against so-called shallow wells will prevail and all of the advantages our years of experience in handling these wells be lost.

Notwithstanding the Trenton limestone and the Clinton limestone have such excellent production records to their credit in northern Ohio and central Indiana fields, many operators fear to enter western Kentucky because its oil reservoirs are found in a limestone formation. It is variously dubbed a short lived field; a small well field; a treacherous field; a "flashy" field; in fact, every bad name known to oildom has probably been applied to the Western Kentucky Field.

We know of no better way to learn the truth or falsity of any claim than to examine the records and ascertain the facts—the cold and unbiased facts, as revealed by daily transactions and faithfully transcribed in the way of pipe line runs and production statistics.

West Kentucky's Development Stages

Western Kentucky has experienced possibly three distinct periods of development; first, soon after the Civil War, when several wells near Glasgow, in Barren County, were drilled and are still in continuous operation, known now as the Oskamp Pool; second, about 1902, when several attempts were made to market oil and a number of good producers drilled, among them being three on the Hinton farm, south of Scottsville, two of which pumped for several years and one is pumping today, making around half a barrel a day; third, the last period, starting about 1913, and still in progress. During this time possibly 5,000 wells have been drilled and more than half are pumping and shipping oil. The United States Geological Survey is said to have estimated the first well ever drilled in Kentucky, along the Cumberland River in 1829, flowed over 50,000 bbls. and produced for many years and still has oil in it; the wells in the Oskamp Pool are said to have averaged about 10 to 12 bbls. flush, while those on the Hinton farm, in Allen County, were rated about the same; a well pumping for a period of 20 years at an average of 1 bbl. a day with oil at $1.25 per barrel would yield something like $7,500 gross on an original outlay of possibly $500 to $750.

Since coming into Kentucky in 1916, the writer has been instrumental in drilling 409 wells in the State, ranging in depth from 150 feet to over 1,300 feet; approximately 80 per cent being commercially productive; our best record was the Hooten lease, 4 miles south of Scottsville, in Allen County, on which we drilled 44 wells and 42 were productive. We paid $125,000 cash for this property in 1919 and have pumped out over $800,000 in oil and it is making about 35 bbls. today. A couple of years ago, while in conversation with the production expert of a Standard subsidiary, we mentioned the thickness of the oil sand on the Hooten, and in a few min-

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Late News From the Fields

NORTH CENTRAL TEXAS

FORT WORTH, Tex., Aug. 4.—H. H. Adams and others' No. 1 Proctor in southeastern Haskell County, which has been attracting a great deal of attention for the past 10 days, is still drilling, having reached a depth of 1,815 feet. It is making about two bailers of oil an hour and the gas pressure is showing considerable increase as drilling continues. The latest formation reported was a brown lime showing both oil and gas.

There are four new producers in various sections of Wichita County not yet listed as completions. The Magnolia Petroleum Co.'s No. 68 Honaker in the old Electra district has been put on the pump, and on a 12-hour test pumped 30 bbls. It has 10 feet of pay sand topped at 1,567 feet.

Hammon and others have a good well in No. 1 Burnett. At last reports it was swabbing at the rate of 200 bbls. daily from sand at 1,781 to 1,802 feet. In the new Mitchell Pool Hooser and others' No. 4-B Mitchell gives promise of being a good producer. It is estimated good for 125 bbls. at 1,290 to 1,295 feet. The Texas Co.'s No. 15 Maer also looks like a good producer from present indications. It is reported swabbing at the rate of 150 bbls. from a total depth of 1,768 feet.

The Texas Co. has also completed No. 301 Waggoner in the Electra district of Wilbarger County. This well is producing flush about 125 bbls. from 5 feet of sand at a total depth of 1,658 feet.

In the Norday Pool of South Archer County, J. J. Perkins has a new producer in No. 3 Anderson. Latest reports say it is swabbing at the rate of 175 bbls. from sand at 1,415-24 feet.

In North Young County, Welch and others' No. 2 Cathey is a fair producer at 1,187-92 feet, making 65 bbls. daily.

The best producer of the week is the Texon Oil & Land Co.'s No. 15 Group 1 University, in the Big Lake Field of Reagan County. Top of the pay was found at 2,883 feet and the well has been drilled to a total depth of 2,924 feet. It is flowing at the rate of 85 bbls. an hour or 2,040 bbls. daily.

GULF COAST

HOUSTON, Tex., Aug. 4.—In the Orange Pool, the American National Oil Co. is preparing to work over No. 1 Winifree, drilled to 4,700 feet and abandoned. The hole will be sidetracked and a test made around 4,100 feet.

The Humble Oil & Refining Co. is rigging for a series of formation tests north of Francitas, Jackson County, explored by the torsional balance system and considered as a prospective dome.

In the Carolina-Texas district, another gas section, in Webb County, the National Refining Co. is rigging No. 2. Muckelroy and others are starting No. 1, and Johnson and De Tray No. 1. There are north of the gassers there. The Texas Wildcat Drilling Co. is rigging No. 1 in the northwest corner of Section 719.

Richard Eke and others are starting No. 1 McKnight in Nacogdoches County. The Union Sulphur Co. has started Nos. 32, 33, and 34 Davis at Big Creek in Fort Bend County as sulphur tests.

At Damon Mound, Hamm & Co., deepening No. 3 Bryan, went into rock salt around 1,800 feet.

At West Columbia, the Humble Oil & Refining Co.'s No. 2 Wilson blew out below 3,700 feet; No. 14 Tyndal-Wyoming is a junked hole with several joints of drill pipe on the bottom and 6⅝-inch casing set and cemented above it. It was believed all the drill pipe had been fished out when the casing was set. Hyde Production Co.'s No. 1 Hyde is bailing light gravity oil.

KANSAS

The first Wilcox sand production in western Greenwood County is in the new wells of Polhamus and others No. 7 Diebert, C S half NW Section 3-25-9. Top of the lime was 2,400 feet and the Wilcox was found 2,815-22 feet. The hole filled up 2,300 feet with oil of 31 degrees gravity.

OKLAHOMA

In Lincoln County, Oklahoma, the Independent Oil & Gas Co.'s No. 1 Earp, SE cor. NE SE Section 6-15-6, had sand at 4,021-22 feet and the well made 138 bbls. in 21 hours. It is an old well drilled deeper.

At Davenport, The Texas Co.'s No. 2 Oleson, NE cor. SW SW Section 2-14-5, was making 280 bbls. from sand at 3,309-64 feet. It was deepened to 3,367 feet and increased to 565 bbls. a day.

East of Okmulgee, the Roxana Petroleum Corp.'s No. 3 Scott, CNL NW SE Section 15-13-14, topped the Wilcox sand at 2,560 feet and the well made 250 bbls. the first 14 hours. Wells No. 1 and 2 on this lease were drilled by the Pierce Petroleum Co. to the shallow sands and abandoned.

Sand depth has been revised on the Sinclair Oil & Gas Co.'s No. 20 Kisner, the east offset to the Sinclair No. 25 Belveal in the Garber Field. It is now recorded as 4,007-15 feet and the well is making 500 bbls. a day. It will be drilled to the Wilcox sand.

Roxana Petroleum Corp.'s No. 2 Schroeder, C NW SW SW Section 18-22-3w, had a show estimated at 125 bbls. a day in sand 4,075-85 feet, and it is drilling at 4,095 feet.

Sinclair Oil & Gas Co.'s No. 25 Belveal has been deepened to a total depth of 4,430 feet and is making 1,960 bbls. a day.

Production of Braman Wells

In the Braman Pool, the following wells made the amount of production indicated for the 24 hours ending Tuesday morning: Comar Oil Co.'s No. 1 Bechtel, 5,436 bbls.; Comar Oil Co.'s No. 3 Bechtel, 89 bbls.; Comar Oil Co.'s No. 1 Horne, 3,258 bbls.; Comar Oil Co.'s No. 3 Horne, 36 bbls.; Comar Oil Co.'s No. 1 Johnson, 2,030 bbls.; Shawver and others' No. 1, 75 bbls.; Herbert Oil Co.'s No. 1, 5,047 bbls.; Herbert Oil Co.'s No. 2, 7 bbls.

BIG NEW WELLS KEEP UP SMACKOVER OUTPUT

EL DORADO, Ark., Aug. 4.—The Graves sand in the Smackover Field yielded two big initial producers as the new week opened, the Gulf Production Co.'s No. 7 Goodwin, C NW NE SW Section 32-15-15, starting at 3,000 bbls. from sand at 2,390-2,405 feet, and The Texas Co.'s No. 13 Berry, NW SW NW Section 33-15-15, being good for 8,000 bbls. from sand at 2,374-80 feet.

In the deeper sand the Empire Gas & Fuel Co.'s No. 5 Bradley, SE SW SE Section 30-15-15, was flowing by heads at the rate of 200 bbls. a day from sand at 2,594-2,602 feet.

The Unity Petroleum Co.'s No. 8 Billyew, NE SW SW NE Section 8-16-15, was setting 8¼-inch casing at 2,539 feet. The Tidal Osage Oil Co.'s No. 5 Vestal, NW NE SW NE Section 17-16-15, has sand at 2,676-80 feet and the well is blowing 30,000,000 feet of gas.

The Standard Oil Co.'s No. 5 Powell, NW SE NW Section 34-15-15, is flowing 500 bbls. a day and 10,000,000 feet of gas from sand at 2,581-98 feet. Hickman and others' No. 1 Graves, NE NW SE Section 3-16-15, was deepened 1 foot with cable tools and is flowing 2,000 bbls. a day from sand at 2,542-55 feet. Coats & Sowell's No. 3 Billyew, NE SW NE Section 8-16-15, set 6⅝-inch casing at 2,411 feet. The Unity Petroleum Co.'s No. 8 Billyew, NE SW NE Section 8-16-15, was drilled at 2,457 feet to test below the Graves sand. O. G. Murphy's No. 7 Murphy, SW SE Section 9-16-15, set 6⅝-inch casing at 2,628 feet. The Laurel Oil & Gas Co.'s No. 2 Houston, NE SE Section 12-16-16, was coring at 2,602 feet. Hollifield and McFarland's No. 12 Vestal, NW NE SW NE Section 17-16-15, is swabbing to test sand at 2,675-80 feet. Deep sand production for the 24 hours ending Sunday at 7 a. m. was 165,020 bbls. from the Graves and lower sands, and 40,400 bbls. from the Nacatoch sand, a total of heavy oil production of 205,420 bbls. The production for the 24 hours ending Monday morning was 163,170 bbls. from the Graves and lower sands, and 40,350 bbls. from the Nacatoch, a total of 203,520 bbls.

NEW POOL OPENED IN FREMONT CO., WYO.

CASPER, Wyo., Aug. 4.—The Producers & Refiners Corp. has opened a new pool in Section 13-28-93, Wyoming, in the southeast corner of Fremont County. The discovery well is good for 50 bbls. a day from the Frontier sand at a depth of about 2,200 feet. The location is north of Ferris Mountains.

GEOLOGISTS DISCUSS FUTURE OF PETROLEUM

WILLIAMSTOWN, Mass., Aug. 1.—An acute situation in the production of the world's supply of oil was predicted for the near future by Dr. Charles Kenneth Leith, professor of geology at the University of Wisconsin, at his round table conference on "Mineral Resources in World Affairs" at the Instiute of Politics, here.

Dr. F. J. Fohs, of New York, geologist, said that the peak of oil production in the United States has passed, except in the Gulf district, which promises to reach its peak in 1928. If oil is not obtained from shale rock, he said, the United States must begin at once to rely on imports of oil. Otherwise, he said, it will not be 50 years before we will have to depend on imports and substitutes.

Dr. V. R. Garfias, former adviser to Central American Governments on oil, said that Mexican oil fields represent the best prospects for world supply in the near future, and that a large oil belt on the eastern slope of the Andes is the best prospect for the distant future.

It was brought out that oil companies were deterred from exploiting Mexican oil fields because of unsettled conditions in Mexico. Dr. A. C. Veatch, vice president of the Sinclair Petroleum Development Co., said that companies do not feet justified in investing money in Mexico. He said that the Caspian region promised to produce much oil in the future.

All agreed the supply of oil is sufficient to meet current needs, but pointed out that the rapid rate at which the demand for mineral oil is increasing was such that large capital, the world's best brains and great daring were necessary to keep production near demand.

TEXAS CO. SURRENDERS ITS OPTION ON CARIB

The Texas Co. has notified the Carib Syndicate. Ltd., that it would surrender its option to acquire 51 per cent of the capital stock of the Carib company, of Maine, controlled by the syndicate, and also the option under which it was to develop the Central and South American properties controlled by the Carib interests.

As a result of the surrendering of the option held by The Texas Co., it was reported that the Carib Syndicate would enter into negotiations with other large oil companies to develop its acreage in foreign countries, but under any new arrangement, it is understood the contracts will be let on a royalty basis. The option held by The Texas Co., entered into five years ago, gave the company the right to purchase 51 per cent of the Carib stock for $5,000,000. It also provided that Texas was to advance Carib funds to carry on its affairs, with certain limitations. In all, it was reported, The Texas Co. advanced $400,000, which will be repaid by Carib.

The Carib Syndicate, it was stated, has arranged to sell 301,100 shares of unissued stock, held in the treasury, to a syndicate which has been organized. Part of the proceeds will be used to reimburse The Texas Co.

Government Reports Increased Pipe Line Runs of Oil in June

WASHINGTON, D. C., Aug. 1.—The quantity of crude petroleum removed from leases in the United States, as reported to the Bureau of Mines during the month of June, 1925, amounted to 66,675,000 bbls., a daily average of 2,223,000 bbls. This represents an increase of 27,000 bbls. per day over the previous record figures of May, 1925. California and, to a lesser extent, Kansas and Oklahoma, were responsible for the increased runs.

East of the Rockies, crude stocks decreased 1,350,000 bbls. as compared with an increase west of the Rockies of 2,070,000 bbls. In the Mid-Continent Field, exclusive of northern Louisiana and Arkansas, there was a decrease of crude stocks of almost 5,000,000 bbls.

UNEVENTFUL WEEK IN EAST CENTRAL TEXAS

CORSICANA, Tex., Aug. 1.—The past week in the East Central Texas area was without feature aside from dry hole wildcats that were reported.

The Rio Bravo Oil Co. has abandoned its deep test on the right-of-way of the H. & T. C. Railroad in the Wortham Field, Freestone County. It was drilled to 4,825 feet and was plugged back to the Woodbine sand, but in neither was there any oil. The Humble Oil & Refining Co. abandoned its No. 6-A Peter Stubbs, Longbotham Survey, Wortham Field, at 3,012 feet. There was 22 feet of dry sand.

In Limestone County, the E. L. Smith Oil Co.'s No. 1 Kime, Carson Survey, was abandoned as a failure at 2,341 feet.

In the Powell Field, the Humble Oil & Refining Co.'s No. 30 B. Ramsey, was completed as a 350-bbl. well, with 50 bbls. of water accompanying the oil, from a stray sand at 2,034-46 feet. A number of shallow sand producers were completed, including the Humble Oil & Refining Co.'s No. 18 Davis, 25 bbls.; same company's No. 17-A Ramsey, 10 bbls.; Gulf Production Co.'s No. 12 Smith, Havens Survey, 25 bbls.; Humble Oil & Refining Co.'s No. 10 Smith, Havens Survey, was dry and abandoned at 2,224 feet.

In the Richland district, Navarro County, the Atlantic Oil Producing Co.'s No. 1 Mrs. Talley was good for 30 bbls. of oil and 3,000,000 feet of gas in sand at 2,975-91 feet.

In the Currie district, the test of Moore Brothers, on the Quimby farm, Anderson Survey, was abandoned as dry at 3,250 feet.

MALLORY FLEET NOW HAS EIGHTEEN TANKERS

NEW YORK, Aug. 1.—As a result of purchases of tankers made largely during the past 12 months, C. D. Mallory & Co., shipping agents, now have a fleet of 18 tankers, aggregating 105,813 gross tons, one of the more important tanker fleets flying the American flag.

Purchases of tankers have been made by the company from oil companies and from other tanker owners, the more important being five tankers from the Standard Oil Co. of New Jersey and six from the Swiftsure Oil & Transport Co.

Tankers purchased from the Standard Oil Co. aggregated 31,222 gross tons. It is understood all these vessels and some additional ones owned by C. D. Mallory & Co. are under charter to the Standard Oil Co. of New Jersey at this time, and are in the trade largely between the Gulf and Atlantic Coasts of the United States.

North-Central Texas Field

By George R. Kelley

Proctor well of H. H. Adams in Haskell County drilling deeper, center of interest during week. Increase in daily average production due chiefly to heavy output in Reagan County and gain in Young County offsetting natural declines in other districts. Another Jack County wildcat.

FORT WORTH, Tex., Aug. 3.—The big interest that has been manifested for the past week in the Proctor wildcat of H. H. Adams and associates in southeastern Haskell County has not slackened any, though the 6-inch casing has been set and the well drilled deeper. As yet the well is not a commercial producer though there are very favorable indications.

More than a week ago the well hit a gas sand at 1,662 feet which at first showed for about 7,000,000 feet daily but subsided to around 3,000,000 or 4,000,000 feet. This was drilled through, then a body of shale and into an oil sand at 1,695 feet. The sand showed for considerable oil, when it was decided to set the 6-inch casing and pull the big casing before drilling further.

This sand proved a disappointment. It was only about 6 inches in thickness and consequently did not produce as at first it indicated. After drilling through this sand the drill encountered a hard brown lime formation, which had a thickness of 14 feet and which showed oil from top to bottom. The hole filled with oil and made one flow from this formation. The lime was very hard and at the time it was estimated the well would have made a fairly good producer from a shot in this lime. This was not done and at latest reports the well is drilling deeper.

The good showings encountered in this well have been highly encouraging and have served to turn considerable attention to the territory surrounding the wildcat. Further development at the well is being watched very closely. This well was about the only high point of interest in North Central Texas development during the week.

The week came forward with a rather substantial increase in average daily production in this territory. The increase was due largely to a rather heavy increase in Reagan County and a very good boost in the output of Young County. The new production added in these two districts served to more than offset the natural declines in other districts.

Reagan County made the best record for many weeks in the number of completions and new production added. The county had three completions, all producers with an aggregate new production amounting to 8,610 barrels. The largest completion was the Texon Oil & Land Co.'s No. 14 Group 1 University, with an initial output of 4,575 bbls. at 2,917 is making 2,065 bbls. flush from 2,940 feet and the Big Lake Oil Co.'s No. 38 University is making 1,970 bbls. flush at 2,891 feet.

Young County had eight completions, only four of which were producers, but the new production from the district amounted to 1,235 bbls. daily. Two of these new wells accounted for 1,100 bbls. of the new production. They are the Humble Oil & Refining Co.'s No. 5 Mercer in the new Wilson pool and Murchison and others' No. 9-D Campbell in the Litchfield-Madden pool, each credited with a flush production of 550 bbls.

The week made a splendid record for new wells completed, thanks to Archer and Wichita Counties. Total completions for the week were 104, more than one-third of which were in Archer County alone and a sufficient number in Wichita County to bring percentage in the two counties to nearly 50 per cent of the completions in the whole of North Central and West Central Texas. New production added during the week amounted to 13,980 bbls.

Of the total completions 57 were oil producers, 42 were failures and five were gas wells, with a gas production of 155,750,000 feet daily. This record of work compares with a total of 99 completions the previous week, 61 of which were producers, 35 dry holes and 4 gassers. New production for the week before was only 4,590 bbls., leaving a gain in new production for this week of 9,390 bbls.

Completions by Counties

The following table gives the completions for the week by counties together with totals for the two weeks for purposes of comparison:

District	Comp.	Prod.	Dry	Gas	Prod'n
Wichita	21	8	13	0	730
Wilbarger	7	6	1	0	410
Archer	35	22	13	0	1,830
Young	8	4	3	1	1,235
Stephens	8	3	5	0	250
Eastland	4	3	1	0	330
Brown	2	1	1	0	200
Reagan	3	3	0	0	8,610
Wildcats	16	7	5	4	455
Total	104	57	42	5	13,980
Last week	99	61	35	3	4,590

The gain in production for the week ending July 30 amounted to 5,580 bbls. in daily average. The total was 169,383 bbls. compared with a total for the previous week of 163,803 bbls.

Reports coming in from Archer County late in the week tell of two unusually good producers brought in on the Luke F. Wilson ranch in the north half of Archer County. They are Burns and others' No. 4 Wilson which is in the sand at 1,397 feet and on a short test swabbed 70 bbls. in two and a half hours. The other good proudcer, neither of which have been completed, is the F. & H. Syndicate No. 1 Wilson. This well has 17 feet of pay sand topped at 1,500 feet and is swabbing at the rate of 460 bbls. daily.

In the south half of Archer County Root and others' No. 2 Routen is a small producer in sand at 1,268 to 1,272 feet. It is making about 47 bbls. initial.

The North Young County area reports one new producer, not yet listed as a completion. It is the Humble Oil & Refining Co.'s No. 1 Kilcrease which early in the week was estimated as a 250-bbl. well. Later it was drilled deeper and put on the pump and is making 150 bbls. The well has six feet of pay sand at a total depth of 1,003 feet.

In the Mitchell pool of Wichita County George Pace and others have a fairly good producer in No. 1 Mitchell. The was has been drilled three feet into the pay at a total depth of 1,310 feet and is estimated to be good for 100 bbls.

The Tidal Oil Co.'s No. 1 Waggoner in Wilbarger County is estimated as a 50-bbl. producer in 10 feet of pay sand topped at 1,985 feet.

Preparations are being made for the drilling of another wildcat test in northern Jack County. It is McKennon and associates' No. 1 Jesse Roper, which has been located on the line of Jack and Clay Counties about 7 miles northwest of the location being drilled by the Humphreys Corp. Timbers are being moved in for the McKennon test which will go to the big lime which the owners expect to find around 2,100 feet.

PRODUCTION REPORT
For the Week Ending July 30, 1925.

BURKBURNETT

Gulf Production Co.	590
Humble Oil & Refining Co.	400
Magnolia Petroleum Co.	2,890
Panhandle Refining Co.	315
Prairie Oil & Gas Co.	12
Sinclair Oil & Gas Co.	60
Sun Oil Co.	120
The Texas Co.	480
Texhoma Oil & Refining Co.	445
Miscellaneous	8,815
Total	14,117

ELECTRA

Empire Gas & Fuel Co.	1,040
Gulf Production Co.	843
Humble Oil & Refining Co.	130
Magnolia Petroleum Co.	3,860
Panhandle Oil & Gas Co.	40
Prairie Oil & Gas Co.	125
The Texas Co.	3,500
Texhoma Oil & Refining Co.	1,775
Miscellaneous	5,987
Total	17,300

IOWA PARK

Gulf Production Co.	40
Humble Oil & Refining Co.	375
Magnolia Petroleum Co.	650
Panhandle Oil & Gas Co.	40
The Texas Co.	501
Texhoma Oil & Refining Co.	35
Miscellaneous	3,300
Total	4,941

ARCHER COUNTY

Empire Gas & Fuel Co.	745
Gulf Production Co.	2,100
Humble Oil & Refining Co.	605
Magnolia Petroleum Co.	1,745
Panhandle Refining Co.	225
Prairie Oil & Gas Co.	3,650
Sun Oil Co.	125
The Texas Co.	2,790
Texhoma Oil & Refining Co.	2,300
Miscellaneous	22,365
Total	36,650

PETROLIA

Gulf Production Co.	92
The Texas Co.	45
Miscellaneous	230
Total	367

STEPHENS COUNTY

Empire Gas & Fuel Co.	75
Gulf Production Co.	1,450
Humble Oil & Refining Co.	845
Magnolia Petroleum Co.	525
Mid-Kansas Oil & Gas Co.	1,510
Prairie Oil & Gas Co.	880
Sinclair Oil & Gas Co.	105
Sun Oil Co.	250
The Texas Co.	1,368
T. P. Coal & Oil Co.	1,135
Miscellaneous	7,145
Total	15,288

RANGER

Gulf Production Co.	300
Humble Oil & Refining Co.	50
Magnolia Petroleum Co.	754
Mid-Kansas Oil & Gas Co.	225
Panhandle Refining Co.	235
Prairie Oil & Gas Co.	550
Sinclair Oil & Gas Co.	350
The Texas Co.	184
T. P. Coal & Oil Co.	910
Miscellaneous	3,005
Total	6,559

MORAN

Empire Gas & Fuel Co.	30
Prairie Oil & Gas Co.	20
The Texas Co.	475
Texhoma Oil & Refining Co.	115
Miscellaneous	2,900
Total	3,540

YOUNG COUNTY

Gulf Production Co.	570
Humble Oil & Refining Co.	1,995
Magnolia Petroleum Co.	715
Mid-Kansas Oil & Gas Co.	25
Panhandle Refining Co.	279
Prairie Oil & Gas Co.	13
Sinclair Oil & Gas Co.	400
The Texas Co.	1,165
Texhoma Oil & Refining Co.	170
Miscellaneous	5,915
Total	11,247

EASTLAND-COMANCHE

Empire Gas & Fuel Co.	15
Humble Oil & Refining Co.	175
Magnolia Petroleum Co.	1,080
Mid-Kansas Oil & Gas Co.	225
Prairie Oil & Gas Co.	150
Sinclair Oil & Gas Co.	80
The Texas Co.	175
T. P. Coal & Oil Co.	120
Miscellaneous	1,845
Total	3,815

MISCELLANEOUS POOLS

Wilbarger County	8,655
Montague County	407
Jack County	25
Throckmorton County	40
Baylor County	190
Palo Pinto County	725
Brown County	2,955
Coleman County	185
Callahan County	3,355
Mitchell County	2,295
Reagan County	32,895
Scurry County	60
Carson County	2,505
Hutchinson County	1,190
Wheeler County	65
Gray County	12
Total	55,559
Total this week	169,383
Total last week	163,803
Gain	5,580

Completions Wichita County

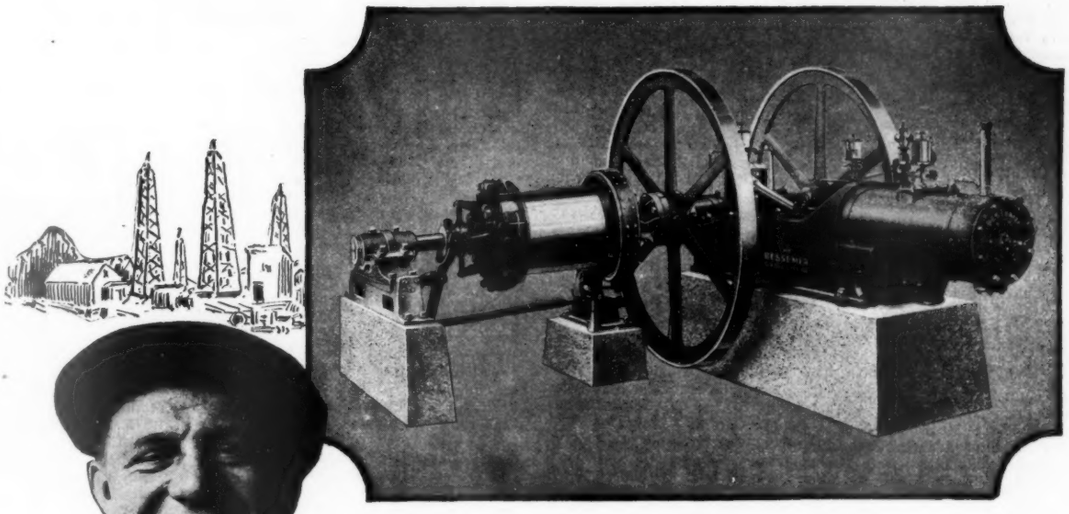
Ascot Co.'s No. 30 Roller, dry at 1,013 feet; Bonchil Co.'s No. 12 Beach, 25 bbls. at 985 feet; Robinson and others' No. 11 Roller, dry at 1,031 feet; Hammon and others' No. 7-A McCarty, 20 bbls. at 1,204 feet; Hammon and others' No. 1 Miller, dry at 1,695 feet; Hawkins and others' No. 10-A Watkins, 35 bbls. at 1,216 feet; Hooser and others' No. 5-A Mitchell, dry at 1,517 feet; No. 6-A Mitchell, dry at 1,610 feet; No. 3-B, dry at 1,546 feet; Moer and others' No. 1 Roberts, dry at 2,002 feet; O'Donohoe and others' No. 4-B Allen & Kemp 125 bbls. at ,647 feet; Perkins & Collum's No. 1 Burnett, dry at 2,000 feet; Petroleum Production Co.'s No. 7-B Allen & Kemp, 200 bbls. at 1,648 feet; No. 8-B Allen & Kemp, 150 bbls. at 1,647 feet; No. 1 Kemp & Kempner, dry at 1,850 feet; Ridgeway and others' No. 2 Powell, dry at 2,108 feet; Texhoma Oil & Refining Co.'s No. 1. J. Burnett, dry at 725 feet; No. 1 C. Woggoner, dry at 2,001 feet; Underwood and others' No. 4 Pace, 65 bbls. of oil and 20 bbls. of water at 1,787 feet; White Brothers' No. 1 Mitchell, 120 bbls. at 1,283 feet; White Eagle Oil & Refining Co.'s No. 3 Hooks, dry at 1,87 feet.

Wilbarger County

Atlantic Oil Producing Co.'s No. 1 Sigler-Waggoner, 25 bbls. at 2,041 feet; Humble Oil & Refining Co.'s No. 22 Stephens, 25 bbls. at 2,027 feet; No. 27 Stephens, 50 bbls. at 2,309 feet; No. 28 Stephens, 75 bbls. at 1,368 feet; McCamey and others' No. 15 Stephens, 45 bbls. at 1,325 feet; Petroleum Production Co.'s No. 3 Dill, 190 bbls. at 2,309 feet; Texhoma & Burton Co.'s No. Waggoner, dry at 2,044 feet.

Archer County

Barkley and others' No. 8 Wilson, 165 bbls. at 1,524 feet; Carter and others' No. 1-B Parkey, 25 bbls. oil and 70 bbls. water at 1,715 feet; Consolidated Oil Co.'s No. 2 Wilson, dry at 1,470 feet. Empire Gas & Fuel Co.'s No. 23-C Wilson, 80 bbls. at 1,616 feet; Fletcher and others' No. 1 Cowan, dry at 1,600 feet; Franklin No. 13-A Parrish, 20 bbls. at 1,614 feet; Humble Oil & Refining Co.'s No. 1 Wisdom, dry at 1,490 feet; Lomax and others' No. 1 Wilson, 110 bbls. at 1,526 feet; McCarty Oil Co.'s No. 7-B Wilson, 30 bbls. at 904 feet; No. 8-B Wilson, 25 bbls. at 908 feet; Muse and others' No. 1 Wilson, dry at 1,420 feet; Nantz and others' No. 1 Wilson, dry at 1,650 feet; Waite Phillips' No. 12 Wilson, 400 bbls. at 1,513 feet; Riner and others' No. 1 Gose, 225 bbls. at 1,588 feet; Simms Oil Co.'s No. 9 Parrish, dry at 1,619 feet; Shappell Oil Co.'s No. 22 Jackson, 30 bbls. at 1,800 feet; Texhoma Oil & Refining Co.'s No. 4-A Taylor, 40 bbls. at 1,608 feet; White Eagle Oil & Refining Co.'s No. 1 Wilson, 10 bbls. at 1,464 feet; Young and others' No. 1 Wilson, dry at 1,800 feet; Archer Oil Corp.'s No. 4-D Farmer, 30 bbls. oil and 20 bbls. water at 1,472 feet; Consolidated Oil Co.'s No. 1 Cowan, dry at 1,854 feet; County Line Oil Co.'s No. 7 Stampfli, 80 bbls. at 1,372 feet; Davis-Hart Co.'s No. 14 Hoach & Junker, 20 bbls. at 1,235 feet; Empire Gas & Fuel Co.'s No. 2 Anderson, 40 bbls. at 1,425 feet; No. 3 Anderson, 165 bbls. at 1,422 feet; Humphreys and others' No. 1 Anderson, dry at 1,457 feet; Mooers and others' No. 1 Ickert, dry at 1,230 feet; Moore and others' No. 4 Rogers, dry at 1,300 feet; Murchison and others' No. 1 Anderson, 80 bbls. oil and 20 bbls. water at 1,438 feet; No. 1-C Echols, dry at Norday Oil Co.'s No. 3-A Anderson, 125 bbls. at 1,416 feet; No. 4-A Anderson,



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40 bbls. at 1,422 feet; Waite Phillips' No. 3 Wolf, dry at 1,803 feet; Prairie Oil & Gas Co.'s No. 24 Richardson-Mayfield, 40 bbls. at 1,293 feet; The Texas Co.'s No. 5 Hill, 50 bbls. at 1,365 feet.

Young County

Dunn and others' No. 1 Craig, dry at 4,525 feet; Hubbard Drilling Co.'s No. 1 Price, 20 bbls. oil and 750 feet gas; Humble Oil & Refining Co.'s No. 5 Mercer, 550 bbls. at 1,074 feet; Murchison and others' No. 1 Hutchings, dry at 1,242 feet; No. 1 Kilcrease, dry at 1,031 feet; Murchison and others' No. 9-D Campbell, 550 bbls. at 993 feet; Simms Oil Co.'s No. 4 Cheeves, 75 bbls. at 1,022 feet; Texas Unity Oil Co.'s No. 4 Hausler, 60 bbls. at 1,073 feet.

Stephens County

Carter & Friedman Co.'s No. 1 Pierre, dry at 3,785 feet; Carter & Thompson Co.'s No. 5 Langford, 50 bbls. at 3,544 feet; Pardee and others' No. 1 Ramsey, dry at 1,755 feet; Landreth Production Co.'s No. 2 Gratz, junked; Little and others' No. 2 Drake, junked; Price and others' No. 4 Bruce, dry at 4,004 feet; T. P. Coal & Oil Co.'s No. 55 Rinney, 50 bbls. at 1,900 feet; Thompson and others' No. 4 Williams, 50 bbls. at 2,081 feet.

Eastland County

Magnolia Petroleum Co.'s No. 5 Allman, 50 bbls. at 1,496 feet; Roswell Production Co.'s No. 4 McMinn, 30 bbls. at 1,505 feet; No. 3 Pettit, 250 bbls. at 1,486 feet; Keough & Gooch Co.'s No. 1, dry at 3,685 feet.

Brown County

Gillman and others' No. 14 Newton, 200 bbls. at 1,290 feet; Ward Oil Co.'s No. 1 Windham, dry at 2,610 feet.

Reagan County

Big Lake Oil Co.'s No. 38 University, 1,970 bbls. at 2,891 feet; Texon Oil & Land Co.'s No. 14 Group 1 University, 4,575 bbls. at 2,917 feet; No. 16 Group 1 University, 2,065 bbls. at 2,940 feet.

Hutchinson County

Amarillo Oil Co.'s No. 2-B Bivins, 140,000,000 feet of gas at 3,137 feet.

Carson County

The Texas Co.'s No. 3 M. C. Burnett, 50 bbls. at 2,290 feet; Texhoma Oil & Refining Co.'s No. 1-B Jackson, dry at 2,405 feet; Vaughan and others' No. 1 Krey, dry at 2,304 feet.

Baylor County

Hooser and others' No. 3 Mills, dry at 1,500 feet; Shaw and others' No. 4 Mills, 15 bbls. at 1,419 feet.

Clay County

Lone Star Gas Co.'s No. 13 Holloway, 15 bbls. at 1,710 feet.

Montague County

Newblock Oil Co.'s No. 1 Maddox, 160 bbls. at 1,000 feet; Pure Oil Co.'s No. 1 Oldham, 8,000,000 feet of gas at 900 feet; The Texas Co.'s No. 4-A Gist, 40 bbls. at 915 feet; Texhoma Oil & Refining Co.'s No A Rowland, 4,000,000 feet of gas at 775 feet.

Throckmorton County

Flowers Brothers' No. 1 Travis County School Land, dry at 1,932 feet; Larkin and others' No. 2 Richards, dry at 1,340 feet.

Shackleford County

Phillips Pertoleum Co.'s No. 3 Fry, 15 bbls. at 393 feet.

Erath County

Gillett and others' No. 1 Maudlin, 3,500,000 feet of gas at 3,351 feet.

Callahan County

Mook and others' No. 1 McDonough, 90 bbls. at 1,434 feet.

Wichita County Drilling

Ascot Co.'s No. 31 Roller is on sand at 992 feet; Bonchil Co.'s No. 1 Bentley, drilling at 970 feet; Magnolia Petroleum Co.'s No. 115 Reilly, 1,285 feet; No. 116 Reilly, 1,319 feet; No. 117 Reilly, 1,180 feet; Reed and others' No. 1 Roller, 670 feet; Robinson and others' No. 12 Roller, 500 feet; Nelson and others' No. 1 Kemper, 600 feet; Allen and others' No. 1 Ancell, 500 feet; Apple and others' No. 4-B Jennings, 1,700 feet; Bullington and others' No. 3 Jennings, 1,624 feet; Burnett Ranch Oil Co.'s No. 12 Burnett, 650 feet; Fidelity Oil Corp.'s No. 1 Peeler, 1,750 feet; No. 12 Peeler, 800 feet; Gardner and others' No. 2 Peeler, drilling deeper at 1,700 feet; Hooser and others' No. 4-A Mitchell, drilling at 1,950 feet; No. 5-B Mitchell, spudding; Humble Oil & Refining Co.'s No. 4 Allen & Kemp, drilling at 1,600 feet; No. 5 Allen. 1.135 feet; No. 6 Allen & Kemp, underreaming; No. 19 Douglas, drilling at 1,968 feet; Maer and others' No. 1 Allen & Kemp, fishing at 1,651 feet; No. 1 Roberts, reaming at 1,100 feet; Magnolia Petroleum Co.'s No. 13 Douglas, drilling at 1,970 feet; No. 21 Maer, on sand at 1,781 feet; No. 49 Rio Bravo, drilling at 1,150 feet; No. 6 Watkins. 540 feet; Mitchom and others' No. 1 Ellison, 300 feet; O' Donahoe and others' No. 6-B Allen & Kemp, 1,626 feet; Patterson and others' No. 1 Douglas, 500 feet; Perkins & Cullom's No. 1-A Burnett ranch, coring sand at 859 feet; Petroleum Producing Co.'s No. 9 Allen & Kemp, drilling at 1,600 feet; No. 10 Allen & Kemp, 1,200 feet; No. 11 Allen & Kemp, 500 feet; Rayzor and others' No. 1 Waggoner, showing on sand at 1,600 feet; The Texas Co.'s No. 302 Waggoner, drilling at 1,803 feet; Texhoma Oil & Refining Co.'s No. 2 Waggoner, 559 feet.

Wilbarger County Drilling

Atlantic Oil Producing Co.'s No. 5 Zipperle, drilling at 2,340 feet; Barkley and others' No. 1 Bond, fishing at 1,200 feet; No. 4 Stephens, drilling at 1,210 feet; Beatty and others' No. 1 Waggoner (Section 15), 1,810 feet; No. 1 Waggoner (Section 47), plugging back at 1,962 feet; Brewer and others' No. 1 Schmoker, underreaming; Bridwell and others' No. 9 Dill, drilling at 2,317 feet; No. 10 Dill, 800 feet; No. 10 Stephens Co., 2,292 feet; W. G. Burton and others' No. 2 Zipperle, 1,650 feet; Continental Oil Co.'s No. 6 Zipperle, 2,329 feet; Culbertson and others' No. 1 Berry, 1,030 feet; Duke and others' No. 1 Archer, fishing at 2,023 feet; Durham and others' No. 1 Waggoner, drilling at 1,780 feet; No. 2 Waggoner, setting casing at 1,177 feet; No. 3 Waggoner, setting casing at 1,700 feet; Gray Oil Co.'s No. 1 Waggoner, drilling at 1,590 feet; Herbert Oil Co.'s No. 1, fishing at 1,140 feet; Hoffer Oil Corp.'s No. 1 Waggoner (Section 43), drilling at 1,890 feet; No. 1 Waggoner (Section 12), 1,400 feet; Holmes and others' Richardson, 2,010 feet; Humble Oil & Refining Co.'s No. 19 Castlebury, cleaning out at 2,300 feet; No. 29 Stephens, setting casing at 2,283 feet; No. 30 Stephens, drilling at 1,566 feet; No. 31 Stephens, 1,673 feet; No. 32 Stephens, spudding in; No. 33 Stephens, spudding in; No. 2-D Waggoner, drilling at 920 feet; No. 1-E Waggoner Co., cleaning out at 995 feet; No. 1-F Waggoner, drilling at 1,480 feet; No. 1-H Waggoner, 590 feet; Independent Oil & Gas Co.'s No. 1 Reed, 1,600 feet; Landreth Production Co.'s No. 1-A Waggoner, underreaming; No. 2-B Waggoner, underreaming; No. 3-B Waggoner, drilling at 1,100 feet; No. 1-D Waggoner, 290 feet; No. 2-D Waggoner, 215 feet; No. 1-F Waggoner, 680 feet; Lawson and others' No. 9 Waggoner, 1,300 feet; No. 10 Waggoner, 700 feet; No. 11 Waggoner, 500 feet; Levy and others' No. 1 Waggoner (Block 4), 2,085 feet; Whibert Oil Corp.'s No. 1-B Waggoner, fishing at 1,310 feet; No. 1-C Waggoner, fishing at 1,810 feet; No. 1-D Waggoner, drilling at 1,656 feet; Wichtex Oil Co.'s No. 1 Waggoner, 1,200 feet; McCamey and others' No. 9 Stephens, 1,900 feet; No. 11 Stephens, 1,580 feet; No. 13 Stephens, 620 feet; No. 21 Stephens, 1,785 feet; McLester Oil Co.'s No. 1 Waggoner, 1,740 feet; Maier and others' No. 1 Waggoner (Section 10), spudding in; Magnolia Petroleum Co.'s No. 69 fee, drilling at 700 feet; No. 45 Piper, 1,160 feet; No. 49 Summer, spudding in; Millham Corp.'s No. 1-A Waggoner, cleaning out at 1,415 feet; No. 1-B Waggoner, drilling at 1,926 feet; Murchison and others' No. 1-C, 1,880 feet; No. 1-D Waggoner, 700 feet; Petroleum Producers Co.'s No. 4 Dill, 2,120 feet; No. 5 Dill, 2,000 feet; Prairie Oil & Gas Co.'s No. 1-B Waggoner, 300 feet; Roy and others' No. 6 Bond, 1,600 feet; Roeser and others' No. 1 Waggoner, 1,480 feet; Smith and others' No. 1 Waggoner (Section 24), cleaning out at 1,300 feet; No. 1 Waggoner (Section 35), cleaning out at 2,420 feet; Smith Vernon Oil Co.'s No. 1 Zipperle, drilling at 1,400 feet; Staley and others' No. 3-A Bond, cleaning out at 1,828 feet; States Oil Corp.'s No. 1 Waggoner, drilling at 1,400 feet; The Texas Co.'s No. 1-C Castlebury, 830 feet; No. 1 Owens, 1,879 feet; Tidal Oil Co.'s No. 1 Waggoner, showing on sand at 1,976 feet; The Upham Co.'s No. 1 Waggoner (Block 1), drilling at 600 feet; Bob Waggoner and others' No. 2 Bond, underreaming; Thelma Wells and others' No. 1 Waggoner, drilling at 1,970 feet.

Archer County Drilling

Champion and others' No. 4 Browning, drilling at 380 feet; Clark and others' No. 1-B Oil Investment Co. is underreaming; Comac Oil Co.'s No. 1 Plowman, drilling at 1,050 feet; Consolidated Oil Co.'s No. 1 Dycus, 100 feet; F. & H. Syndicate's No. 2 Wilson, 500 feet; No. 3 Wilson, 300 feet; Gardner's No. 1 Todd, 1,198 feet; Humble Oil & Refining Co.'s No. 1 Cowan, 1,551 feet; No. 1-B Netherton, 100 feet; No. 1-D Wilson, underreaming; No. 1-E Wilson, underreaming; Kentucky Oil Corp.'s No. 2 Wilson, drilling at 1,410 feet; Lomax and others' No. 2 Wilson, feeling for sand at 1,500 feet; No. 3 Wilson, drilling at 600 feet; No. 4, underreaming; Magnolia Petroleum Co.'s No. 8 Wilmot, underreaming; McCarty Oil Co.'s No. 9-B Wilson, drilling at 870 feet; No. 10-B Wilson, on sand at 500 feet; No. 11-B Wilson, drilling at 845 feet; McElreath and others' No. 1 Coleman, spudding in; Muse and others' No. 1 Wilson, drilling at 600 feet; Pace and others' No. 1 Wilson, 600 feet; Waite Phillips Co.'s No. 2-B Wilson, underreaming; No. 13 Wilson, drilling at 1,375 feet; No. 14 Wilson, 1,405 feet; No. 15 Wilson, spudding in; No. 16, spudding in; No. 17, underreaming; Phillips Petroleum Co.'s No. 80 White, drilling at 1,775 feet; No. 81 White, 150 feet; No. 82 White, underreaming; Prairie Oil & Gas Co.'s No. 14-E Wilson, cleaning out at 1,568 feet; Riner and others' No. 2 Gose, underreaming; No. 27-B Wilson, drilling at 1,520 feet; Scott and others' No. 1 Parrish, 1,000 feet; Staley and others' No. 1 Wilson, 900 feet; Sun Oil Co.'s No. 2-A Wilson, cleaning out at 1,413 feet; Texhoma Oil & Refining Co.'s No. 44 Gose, underreaming; No. 5-A Taylor, drilling at 1,490 feet; Texhoma Oil & Refining Co.'s No. 14-B Wilson, 1,100 feet; White Eagle Oil & Refining Co.'s No. 2 Wilson, on sand at 1,431 feet; No. 3 Wilson, drilling at 450 feet; Burns and others' No. 1 Threat, 500 feet; Jack Clark and others' No. 3 Cowan, 860 feet; R. R. Clark and others' No. 1 Kinder, on sand at 1,197 feet; Empire Gas & Fuel Co.'s No. 4 Anderson, drilling at 1,426 feet; No. 5 Anderson, 983 feet; Magnolia Petroleum Co.'s No. 6 Coffield, cleaning out at 1,396 feet; Major Petroleum Co.'s No. 8 Cowan, plugging back to 1,080 feet; No. 9 Cowan, drilling at 300 feet; Morland Oil Co.'s No. 1 Logan, 480 feet; New Domain Oil Co.'s No. 1 Anderson, 1,320 feet; Perkins' No. 2 Anderson, on sand at 1,437 feet; Waite Phillips Co.'s No. 4 Wolf, drilling at 1,370 feet; The Texas Co.'s No. 2 Key, 1,560 feet; Weekley and others' No. 1 Pace, 150 feet; Young and others' No. 1 fee, 1,141 feet.

Stephens County Drilling

Hofmeier and others' No. 1 Keel, drilling at 1,575 feet; Mid-Kansas Oil & Gas Co.'s No. 13 Hill, 3,235 feet; No. 17 Hill, 1,540 feet; No. 6 Hill, 340 feet; Moore and others' Cunningham, 1,250 feet; Republic Production Co.'s No. 6 Knox, 3,280 feet; Swensondale Oil Co.'s No. 8 Cobb, cementing at 3,323 feet; T. & P. Coal & Oil Co.'s No. 4 Kirtley, drilling at 2,210 feet; The Texas Co.'s No. 3 Martin, showing oil and gas at 3,208 feet; Barkley and others' No. 1 Hames, drilling at 2,200 feet; Carter and others' No. 2 Pierce, 2,100 feet; No. 1 Vaughon, 2,385 feet; Carter & Thompson's No. 6 Langford, 2,090 feet; No. 1 Polan, 2,240 feet; Clayton and others' No. 1 Morton, 3,552 feet; Hagaman Refining Co.'s No. 1 Hagaman, spudding in; Houston and others' No. 1 Fletcher, showing gas at 1,820 feet; Kleinfelder and others' No. 3 Grimes, spudding in; Landreth Producing Co.'s No. 1 Elliott, drilling at 2,235 feet; No. 3 Gratz, 100 feet; Lyman and others' No. 1 Langford, 1,410 feet; McAlester Oil Co.'s No. 1 Langford, fishing at 1,055 feet; Magnolia Petroleum Co.'s No. 6 Walker, drilling at 2,950 feet; Pender Production Co.'s No. 1 Elder, on sand at

(Continued on Page 118)

CENTRAL NEW MEXICO TO BE TESTED ON STRENGTH OF OIL SHOWINGS

By Anthony McCauley

DURAN, N. Mex., Aug. 1.—With two proven fields in New Mexico, one at the extreme northwestern part and the other in the far southeastern portion of the State, oil men and geologists have been constantly at work for the past six months in an effort to uncover a mid-state field. Drilling reports show test wells at work and new locations being made in an effort to bring this about.

Torrance County so far seems to be a favored spot not only because of the number of tests preparing to start, but from a purely geological standpoint. The structures are domal, on a monocline stretching all the way from the Manzano uplift, with an eastern dip, across the Pecos and under Western Texas. There are numerous exposures of rock in place so that the dips are easily distinguished, in marked contrast to the vast territory stretching to the southeast all way to Artesia, which is covered by unconsolidated deposits, and on which it is impossible to define structures. The Triassic red beds are exposed on top of the Permian near Vaughn. But in the Duran region, 18 miles to the southwest of Vaughn, several well defined sections of the Chupadera formation, which includes the upper members of the Permian here, are exposed, showing the dips west, north and south. Underlying the Permian, the Pennsylvanian in this part of Torrance County, has a thickness of 2,500 feet, according to geologists of the big companies. Although the "red beds" do not contain sufficient carbonaceous detritus to make them favorable for the origin of oil, these portions of the Permian in the Duran district have been shown by logs up to 1,254 feet to contain half a dozen thick strata of coarse grained, loosely packed sandstone which form excellent collecting reservoirs for oil ascending from lower formations. Deeper tests are expected to afford surprises in the Pennsylvanian.

Hope in the Abo Sandstone

The superintendents of companies operating in the Duran region, expect to strike their first possibly producing horizon in the Abo sandstone, which has a thickness of from 800 to 1,200 feet, immediately underlying the Chupadera.

Attention of wildcatters was recently attracted to this region by the discovery of a freak shallow oil at a depth of only 66 feet by Tom Barnett, who was drilling a stock well for water on the Melcor Luna ranch, 9 miles west of Duran, Section 26-3n-13e. The oil seeps at the rate of two gallons daily and laboratory tests show that it is 70 per cent gasoline and almost 30 per cent lubricant, with hardly any impurities. Field experts are satisfied that this oil is migratory and has been filtered for many miles through the caliche, which appears as a carbonate of lime deposit on top of the surface of a vast topographical basin which has been hollowed out by water on top of the Permian, several miles to the west of the Duran domal structure. The point of origin of this freak migratory oil has been traced to the slope of an old ancestral range, the

(Continued on Page 118)

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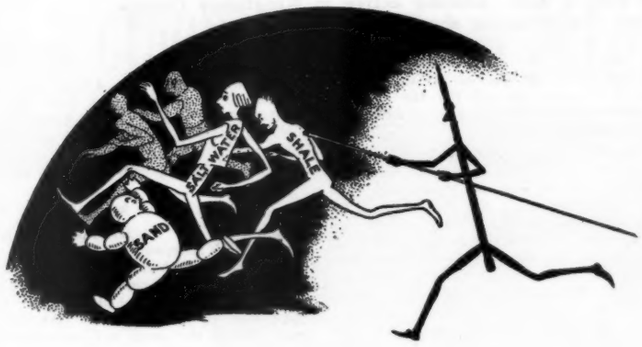

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WE ARE told that in warfare a lapse of vigilance, a lack of endurance, a moment's relaxation is fatal. And we presume that if a sucker rod or working barrel could recount its experience it would tell a similar story.

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Oklahoma Field Operations

By J. L. Dwyer

Tests in Holdenville Pool abandoned as hopeless. What looks like Bartlesville sand found productive in well offsetting Garber's Wilcox sand discovery well and good for 800 bbls. a day. Leasing active in Kingfisher County. Good wells in Josey Pool. Encouraging showings in wildcat tests.

Following the disappointing showing of the Holdenville Pool, in Section 35-8-8, reported last week, it was announced this week that 15 wells have been abandoned at various shallow depths, further drilling having been looked upon as hopeless. The well of the Phillips Petroleum Co., in Section 2-7-8, will be carried on down to deeper sands with some of the other companies owning adjacent leases assisting in the expense. The discovery well of the pool, the Gypsy Oil Co.'s No. 1 Proctor, SW cor. NE, Section 35-8-8, is down to less than 700 bbls. a day.

North of the pool, the Waite Phillips Co. will drill a well in the NE cor. NW SW, Section 24-8-8. This, in the opinion of the geologists, is likely-looking territory. There has been a structure mapped out in Sections 24 and 25 for some time, and it may be that the main body of the pool will be discovered in this region.

All of the oil pools of the State, except Braman and Garber, showed a decrease last week. The Garber Field, lightly speaking, has as many sands as the proverbial sea, and the discovery of another one brings the roster of producing sands to 14, with prospects of the Layton sand making 15.

The new sand was found by the Sinclair Oil & Gas Co. in No. 20 Kisner, NW cor. NW, Section 19-22-3w, a direct east offset to the Sinclair Oil & Gas Co.'s No. 25 Belveal, the discovery well, in the Wilcox sand. The new sand is thought to be the Bartlesville, as that formation offers the closest possible correlation. The sand was topped at 4,025 feet and the well made 50 bbls. an hour at the start. The gauge for the first day was 800 bbls. and it is maintaining its production at this rate. The sand has been located as below the Layton sand and above the Wilcox formation.

In the Garber Field, there are 22 wells drilling below 3,600 feet, and 7 wells are drilling deeper than 4,000 feet. This will result in a large number of completions coming at almost the same time and will probably throw a large quantity of crude oil on the market temporarily. Pipe line conditions are almost sure to be congested for a while at Garber.

Garber's New Crude Price

The battle over the price of Garber crude has been declared a truce with both sides making concessions. The Sinclair Oil & Gas Co., which announced some time ago a new schedule for their Garber crude, met with a setback when the Champlin Refining Co. and the Bolene Refining Co. both broke their connections from the Sinclair leases. The Sinclair interests ran their own crude for a few days and then the refiners came forward with a proposition which was not accepted but which led the way to negotiations that were consummated. The new schedule of price for Garber crude establishes a top gravity of 47 to 47.9 degrees with a top price of $2.92. The refiners are paying a 10-cent premium over this price and this has made the average price paid for Garber crude $2.75.

During the past week, the Sinclair Oil & Gas Co. deepened No. 25 Belveal to a total depth of 4,415 with little increase. It is making 1,748 bbls. a day. The Sinclair Oil & Gas Co.'s No. 1 Burns, C NE SE, Section 30-22-3w, looks as if it were doomed for the "farmer sand" and is drilling away at 4,650 feet with nothing showing.

In the south Braman Pool, on the edge of the Braman townsite, the first trace of water was discovered last week in Comar Oil Co.'s No. 2 Bechtel, CNL SE SE SW, Section 5-38-1w. This well is located between the Herbert Oil Co.'s No. 1 and the Herbert No. 2, and therefore, had little reason for hope from the owners. The well made 256 bbls. of oil and some water the first day.

In Seminole County, the Indian Territory Illuminating Oil Co.'s No. 1 Wallace, NE cor. NE SE, Section 32-10-8, had a good show of oil in the top of the sand but the last 2 feet showed water. Sand was topped at 3,221 feet and the water appeared at 3,240-42 feet. The pipe will be lowered and drilling continued. The water made 3 bailers an hour.

In the Thomas Pool, the Marland Oil Co.'s No. 1 School Land, SE cor. SW, Section 16-25-2w, three-quarters of a mile west of the Thomas well, had the top of the Mississippi chat at 4,244 feet, and has a total depth of 4,266 feet. The last 2 feet showed the oil and the hole filled. It made one small flow on Sunday and the 5-inch casing was dropped while being run. The well now has a fishing job. The Twin State Oil Co.'s No. 2 Siler, the south offset to the Marland Oil Co.'s Thomas well, continues to drop in production.

Kingfisher County seems to be getting quite a play from the lease men and also from the companies. There have been several blocks taken by individuals in the County. One dollar an acre seems to be the prevailing bonus that has been paid for these blocks. The Amerada Petroleum Co., Magnolia Petroleum Co., the Gypsy Oil Co., Mid-Continent Petroleum Co. and the Sinclair Oil & Gas Co. have been making scattered purchases of acreage throughout the county.

The Champlin Refining Co. will lay an 8-inch line from their Morris station, in the Tonkawa Field, to the new Thomas Pool.

The Magnolia Petroleum Co. has purchased a half interest in the block of acreage and the one producing well of the Bement Oil Co., in Pawnee County, Oklahoma. The well, which behaved queerly when it was first brought in, is still making 17 bbls. a day. It is in the SE cor. SW SE, Section 30-23-5, 6 miles north of the city of Pawnee. The Magnolia Petroleum Co. evidently believes in the prospects of the territory as it is reported it will start additional drilling operations immediately.

The Carter Oil Co. purchased a half interest in the block of acreage held by Thornton and others, of Enid, Okla., in Section 30-25-1w, near the Tonkawa Field. It is a small block amounting to about 350 acres.

In the Davenport Field, Lincoln County, the Twin State Oil Co. has started running its own production and shipping by tank car.

The Wentz Oil Corp. is threatening to open up new fields in Noble County, in its No. 1, SE cor. NE NW, Section 27-22-1. This wildcat well was carrying 4,000 feet of wate in the hole when the sand was touched at 4,506 feet and drilled to 4,510 feet. The first day the well made several flows by heads at intervals of about one hour and amounting to about 10 bbls. each flow. It is having the 5-inch casing run to shut off the water.

Test Shows Much Gas

North of the Yeager Pool, the wildcat of the Independent Oil & Gas Co. has a big flow of gas. It is No. 1 Long, SE cor. NW, Section 14-8-9, and the sand was barely touched at 2,991 feet. The well is making 38,000,000 feet of gas. While the sand has not been accurately identified, it is believed by the majority of geologists to be the Gilcrease sand.

Near Okemah, a great disappointment is the failure of the J. K. Leard and others test in Section 21-11-9. This well, located in the SE cor. NW, of the section, was drilled on good geological prospects and the structure was checked by several geologists. There was a showing of almost 1,000,000 feet of gas in a sand found at 3,450-75 feet, and the Gilcrease sand, found at 3,207-40 feet, held a show of oil, but the total depth at which the well was abandoned as dry is 3,580 feet.

Josey Pool Looking Up

In the Josey Pool, in Section 33-12-11, the Josey Oil Co. has completed two more wells that have bolstered up the production of the region. No. 5 McCoy, NW cor. SW, Section 33-12-11, looks good for 450 bbls. in sand at 3,619-39 feet, and No. 7 McCoy, NW cor. NW SW, Section 33-12-11, is reported as making 315 bbls. a day from the Deaner sand, found at 2,919-21 feet.

The ill-fated Roxana Pool, in Section 1-8-8, was pushed farther into the grave when the Sinclair Oil & Gas Co. found a hole full of water in its well, SE cor. SW NW, Section 1-8-8, at a total depth of 4,438-42 feet. The well will be plugged back to a depth of 3,400 feet, where a sand held a show of oil.

In Noble County, between the K-D well and the production of the Bu-Vi-Bar Oil Co., the Champlin Refining Co. has built a rig, SW cor. NW, Section 26-22-2w.

In Pawnee County, the Gypsy Oil Co. and the Selby Oil Co. have drilled an old well deeper in the NE cor. SW NW, Section 1-20-7. Sand was found at 2,815-45 feet and the well flowed 54 bbls. the first 12 hours. The sand has been identified as the Burgess.

In the Deep Rock Pool, in Payne County, the discovery well of the Deep Rock Oil Co., in Section 23-18-3, is making 615 bbls. a day and the water has been successfully plugged off.

In Comanche County, a wildcat well struck some gas and a little oil in George Hanbury's No. 1 Munson, SE cor. SW SE NE, Section 30-2-9w, where a sand was topped at 1,910 feet and the well, as it stands, is estimated at 3,000,000 feet of gas and 40 bbls. of oil.

Duster North of Cromwell Pool

North of the Cromwell Pool, another duster has further sealed the fate of the wildcat of Guy Fisher and Holm & Jarvis, which excited the producers seven weeks ago. The failure is the second duster to offset the freak well. It is Holm & Jarvis' No. 1 Lucinda, NW cor. NW SW, Section 14-11-8, and had broken sand at 3,498-3,528 feet, total depth 3,575 feet. It is dry and will be abandoned at this depth. West of Cromwell, the Denver Producing & Refining Co. has a hole full of water in No. 1 Lowe, SE cor. SE NW, Section 6-10-8. Total depth is 3,675 feet, and the well probably will be abandoned.

North of the Papoose Pool, on the gas structure opened up by the Fuhrman Petroleum Co., of Okmulgee, and the Shaffer Oil & Refining Co., another completion has been recorded. It is the Gibson & Zahniser's No. 1 Tecumseh, SE cor. NW SE, Section 16-10-9, which had the sand at 3,250-87 feet and is making 105,000,000 feet of gas and spraying some gasoline.

On the west edge of Lincoln County, the Floyd O. Howarth Oil & Gas Co.'s No. 1 Harris, SE cor. NE, Section 22-15-2, found a hole full of water in sand at 4,71075 feet, and the well is drilling at 4,934 feet.

In the Papoose Pool, the Indian Territory Illuminating Oil Co. has added another well to its list of producers in this pool. The new find is No. 8, NE cor. SW, Section 1-9-9, and the sand was at 3,389-3,409 feet. The well gauged 785 bbls. the first day.

The Mid-Kansas Oil Co. is attempting to find production close to the wildcat well in Pawnee County, which started off so well a few weeks ago. The well was in Section 4-23-5, and there is a rumor that the Mid-Kansas will erect a rig offsetting the well.

Corley & Bruce, of El Reno, Okla., will start a test in Noble County, in the SE cor. NE SW, Section 7-21-1w.

A list of production by fields and by companies for the week ending July 27 follows:

PAPOOSE

Company—	Wells	Prod.
Amerada Petroleum Co.	4	822
Arkansas Fuel Oil Co.	1	14
Berry Petroleum Co.	1	94
Carter Oil Co.	9	1,010
Mid-Continent Petroleum Co.	16	1,889
Foster Investment Co.	7	307
Gilcrease Oil Co.	3	76
Margay Oil Co.	1	46
Gypsy Oil Co.	4	255
Independent Oil & Gas	23	1,918
Tannings Bros.	2	331
I. T. Ill Oil Co.	8	1,798
Josey Oil Co.	4	736
Kingwood Oil Co.	9	30
Magnolia Oil Co.	2	35
Papoose Oil Co.	12	419
Prairie Oil & Gas Co.	10	527
Phillips Petroleum Co.	4	1,664
Robinson & Amerada Pet.	7	762
Skelly Oil Co.	2	139
T. B. Slick et al	41	1,790
T. B. Slick & Gypsy Oil	4	159
Transcontinental Oil	11	1,030
H. F. Wilcox Oil & Gas	1	60
Midwest & Gulf Co.	1	31
Total	188	16,816

WEWOKA

Company—	Wells	Prod.
Berry Petroleum Co.	1	295
Boggs & Sykes	2	801
Dixie Oil Co.	39	2,484
Gypsy Oil Co.	2	125
Homaokla Oil Co.	3	70
Independent Oil & Gas Co.	7	212
Lewis & Clark	1	40
Magnolia Petroleum Co.	27	1,391
Prod. & Ref.	24	4,547
W. R. Ramsey	15	2,329
Roxana Petroleum Corp	3	127
Shaffer Oil & Ref. Co.	7	819
Sinclair Oil & Gas	1	off
Total	137	13,240

SOUTH WELEETKA

Company—	Wells	Prod.
Magnolia Petroleum Co.	6	335
Mid-Kansas Oil & Gas	12	362
Tidal Osage Oil Co.	19	1,797
Total	37	2,494

YEAGER POOL

Dixie Oil Co.	3	917
Independent Oil & Gas Co.	1	86
Total	4	1,003

HOLDENVILLE POOL

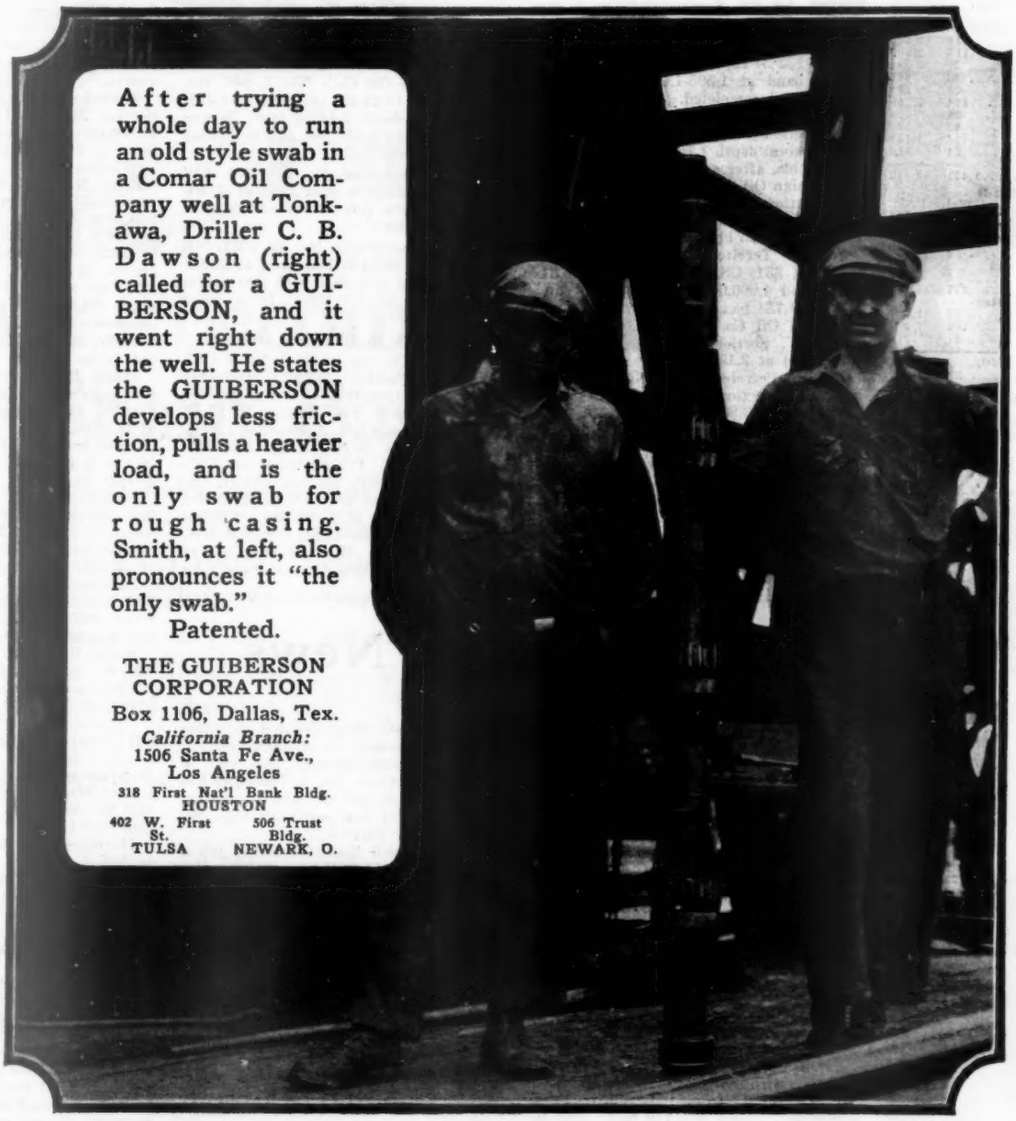
Gypsy Oil Co.	1	1,020
Roxana Petroleum Co.*	1	2,002
*40 per cent water	2	3,022

CROMWELL

Company—	Wells	Prod.
Amerada Petroleum Co.	10	522
Berry Petroleum Co.	1	50
Burke-Gries	4	282
Carter Oil Co.	52	4,065
Carter Oil & Gardner Pet.	7	45
Central National Petroleum Co.	8	720
Continental Oil Co.	9	1,149
Mid-Continent Petroleum Corp.	32	768
Empire Gas & Fuel Co.	3	209
Gilliland Oil Co.	8	139
Gypsy Oil Co.	55	4,488
Gypsy Oil and Laurel Co.	9	1,128
T. B. Hoffer et al	4	200
Holmes & Jarvis	1	2
Hooten Oil & Gas	3	826
Independent Oil & Gas Co.	3	37
Kingwood Oil & Sinclair O. & G.	4	107
McMann Oil Co.	11	558
Mid-Kansas O. & G. Co.	4	269
Prairie Oil & Gas Co.	14	1,716

STRUGGLED A DAY WITH OLD SWAB

Then a GUIBERSON *Ran Right In*



After trying a whole day to run an old style swab in a Comar Oil Company well at Tonkawa, Driller C. B. Dawson (right) called for a GUIBERSON, and it went right down the well. He states the GUIBERSON develops less friction, pulls a heavier load, and is the only swab for rough casing. Smith, at left, also pronounces it "the only swab."

Patented.

THE GUIBERSON CORPORATION
Box 1106, Dallas, Tex.

California Branch:
1506 Santa Fe Ave.,
Los Angeles

318 First Nat'l Bank Bldg.
HOUSTON

402 W. First St.
TULSA

506 Trust Bldg.
NEWARK, O.

GUIBERSON

BETTER BE SAFE GUIBERSON THAN SORRY

Pure Oil Co.	10	150
Roxana Petroleum Co.	24	1,489
Shaffer O. & G. Co.	8	197
Sinclair O. & G. Co.	24	3,113
Sinclair Oil & Gas and Gardner Petroleum Co.	8	1,548
Sinclair Oil & Gas Co. and Houston Oil Co.	4	1,988
Snowden & McSweeney	4	510
Southwestern Petroleum Co.	19	1,552
Superior Oil Co.	6	97
Tidal-Osage Oil Co.	12	2,477
H. F. Wilcox Oil & Gas	7	158
Waite Phillips Petroleum Co.	19	1,275
White Eagle Oil & Ref.	3	42
Devonian Oil Co.	1	189
Total	390	31,581

BURBANK FIELD

Company—	Wells	Prod.
Lewis Oil Co.	8	1,045
Carter Oil Co.	272	9,657
Comar Oil Co.	7	135
Devonian Oil Co.	16	137
Gypsy Oil Co.	194	3,071
Kewanee Oil & Gas Co.	26	314
Laurel Oil & Gas Co.	16	198
Lorraine Petroleum Co.	15	92
Midland Oil Co.	37	772
Mid-Kansas Oil & Gas Co.	40	1,234
Peters & Oliphant	2	124
Phillips Petroleum Co.	167	11,344
Phillips Petroleum Co. and Delmar Oil Co.	16	1,154
Phillips Petroleum Co. and Skelly Oil Co.	178	3,310
Prairie Oil & Gas Co.	115	3,800
Producers and Refiners	29	349
Roxana Petroleum Corp.	54	662
Simons & Moore	29	284
Sinclair Oil & Gas Co.	144	2,190
Skelly Oil Co.	24	859
Tidal-Osage Oil Co.	43	566
The Texas Co.	16	1,159
Twin State Oil Co.	24	586
Total	1,471	43,042

TONKAWA FIELD

Company—	Wells	Prod.
Amerada Petroleum Co.	39	1,705
Blackwell Oil & Gas	33	932
Carter Oil Co.	4	98
Champlin Refining Co.	2	18
Champlin Ref. Co. and Twin State Oil Co.	1	5
Comar Oil Co.	377	25,493
Mid-Continent Oil Co. and Marland Oil Co.	17	1,997
Gypsy Oil Co.	109	7,119
Healdton Oil & Gas	27	818
Wentz Oil Corp.	50	4,248
McMann Oil Corp.	2	154
Pennok Oil Co.	32	1,351
Phillips Petroleum Co.	3	33
Prairie Oil & Gas	12	480
Sinclair Oil & Gas	1	7
T. B. Slick and Comar Oil	28	1,634
Southwestern Petroleum Co.	15	523
The Texas Co.	9	5,407
White Eagle Oil & Ref. Co.	7	106
Louis Friedman and others	1	53
Total	779	52,181

TONKAWA DEEP SAND ONLY*

Company—	Wells	Prod.
Amerada Petroleum Co.	8	1,020
Pennock Oil Co.	7	603
Comar Oil Co.	50	18,462
Gypsy Oil Co.	16	3,764
T. B. Slick	7	736
Blackwell Oil & Gas Co.	3	272
Wentz Oil Corp.	8	3,010
The Texas Co.	1	5,360
Phillips Petroleum Co.	1	14
McMann Oil Corp.	1	104
Mid-Continent & Marland Oil Co.	1	1,828
Louis Friedman and others	1	53
Total	108	35,276

KAY COUNTY EXTENSIONS

Company—	Wells	Prod.
George Bole	3	286
Carter Oil Co.	11	941
Comar Oil Co.	19	1,042
Mid-Continent Petroleum Co.	16	1,065
Gypsy Oil Co.	19	252
Laurel Oil & Ref. Co.	5	198
Mid-Kansas Oil & Gas	10	754
Phillips Petroleum Co.	32	2,577
Prairie Oil & Gas Co.	4	163
Pure Oil Co.	5	308
Roxana Petroleum Co.	8	303
Dye & Tomlinson	8	510
Skelly Oil Co. and Phillips Pet.	21	384
Sinclair Oil & Gas Co.	5	216
The Texas Co.	16	255
Twin State Oil Co.	15	801
Total	197	10,055

HOLDENVILLE DISTRICT

North Braman—	Wells	Prod.
Comar Oil Co.	18	2,398
White Eagle Oil Co.	1	46
Gypsy Oil Co.	1	19
Total	20	2,463
South Braman Pool—		
Herbert Oil Co.	2	4,826
Comar Oil Co.	3	10,696
Shawber and others	1	61
Total	6	15,583
Hubbard Pool—		
Marland Oil Co.	13	1,562
Mutual Oil Co.	1	74
Prairie Oil & Gas Co.	10	528
Totals	24	2,164
Watchorn Pool—		
Watchorn Oil & Gas Co.	8	2,032
Magnolia Petroleum Co.	8	4,189
Total	16	6,221
Thomas Pool—		
Twin State Oil Co.	1	1,526
Marland Oil Co.	1	3,269
Marland Oil Co.*	3	88
Total	5	4,883

*Shallow wells.

Stroud—		
Amerada Petroleum Co.	13	837
The Texas Co.	1	10
Transcontinental Oil Co.	1	50
Roxana Petroleum Co.	16	1,069
Dowell and others	1	92
Bailey and others	1	97
Community Oil Co.	1	40
Willis Oil & Gas Co.	2	75
C. F. Noble	3	85
Wheeler & Webb	2	off
Hoyt & Wicker	1	90
Union Petroleum Co.	8	285
J. A. Hull & Co.	8	475
Waite Phillips Co.	3	94
Wood & Farren	4	225
Pulaski Oil Co.	2	80
Twin State Oil Co.	1	160
Pure Oil Co.	2	370
Total	70	4,134

The Davenport Field produced on an average of 9,458 bbls. a day from 28 wells, an increase of 537 bbls.

Osage Completions

Oswego Petroleum Co. and others' No. 2 CNL NE NE, Section 21-21-12, Osage County, had sand at 1,560-75 feet, total depth 1,925 feet, and plugged back to 1,576 feet. It is good for 5 bbls. natural.

Breene and others' No. 13, C NW, Section 23-31-10, had sand at 1,575-1,615 feet, and is doing 100 bbls. after a shot of 150 quarts.

American Oil & Development Co.'s No. 3, CNL NE SE, Section 13-23-10, is dry and abandoned at 2,339 feet.

Owen-Osage Co.'s No. 331 SW cor. NE, Section 32-24-12, had 2,000,000 feet of gas in sand at 1,595-1,600 feet, and is shut in and completed.

Barnsdall Oil Co.'s No. 2, CEL SE SW, Section 1-24-11, had sand at 1,714-40 feet, total depth 1,750 feet. It is making 20 bbls. after a shot of 130 quarts.

Devonian Oil Co.'s No. 10, C south half SW, Section 34-25-11, had sand at 1,677-1,702 feet and was shot with 60 quarts. It is maknig 25 bbls.

Indian Territory Illuminating Oil Co.'s No. 331, CSL SE NE, Section 34-25-11, had 4,000,000 feet of gas in sand at 1,696-1,734 feet and is shut in.

Beacon Oil Co.'s No. 1 C north half NW NW, Section 16-25-10 is dry and abandoned at 2,191 feet.

Phillips Petroleum Co.'s No. 1, SE cor. NW SE, Section 20-24-5, is dry and abandoned at 3,800 feet.

Phillips Petroleum Co.'s No. 11, SW cor. NE NW, Section 12-27-5, found sand at 2,960-3,031 feet and the well is making 150 bbls. after a shot of 140 quarts.

Winona Oil Co.'s No. 7, SW cor. SE SW, Section 22-29-11, had sand at 962-1,006 feet, was shot with 180 quarts, and is good for 100 bbls.

Owen-Osage Co.'s No. 331, SW cor. NE, Section 32-24-11, had top of sand at 1,595 feet with 2,500,000 feet of gas. It is not completed.

Titus and others' No. 7, CWL NW NE, Section 12-24-11, had the Bartlesville sand at 1,710-55 feet, and is good for 12 bbls. after a shot of 200 quarts.

Plymouth Petroleum Co.'s No. 3, C NE SW, Section 33-35-11, had sand at 1,737-1,818 feet and is making 6 bbls. after a shot of 210 quarts.

Western American Oil Co.'s No. 9, NE cor. NE, Section 28-24-10, had Layton sand at 839-52 feet and is being cleaned out after a shot of 60 quarts.

D. E. Seaman and others' No. 1, SE cor. NW, Section 32-24-8, had sand at 2,000-50 feet, total depth 2,060 feet and is making 30 bbls. of oil and 40 bbls. of water.

Owen-Osage Co. has completed No. 332 CWL NW SW, Section 11-27-11. Sand was at 1,898-1,903 feet and the well is shut in with 750,000 feet of gas. No. 333 CSL SW NE, Section 36-28-10 had sand at 1,923-59 feet and is completed for 1,000,000 feet of gas.

Mid-Kansas Oil Co.'s No. 1, SW cor. NW, Section 11-21-10, had sand at 2,311-30 feet, total depth 2,442½ feet. It was plugged back to 2,430 feet and is making 525 bbls. natural.

Peters and others' No. 2, CWL SW NE, Section 32-24-9, shot sand at 2,094-2,161 feet with 100 quarts and is estimated at 25 bbls.

Foster & Norwood's No. 49, CEL NE SW, Section 23-24-9, had sand at 2,091-2,140 feet and was shot with 200 quarts and is good for 10 bbls. It is being cleaned out.

New Work in Okmulgee District

Josey Oil Co. has spudded No. 4 CSL NW NW, Section 33-12-11, Okfuskee County; Continental Oil Co. Co. spudded No. 1, SW cor. SE, Section 17-12-12, Okmulgee County; G. A. Simons is drilling at 350 feet in No. 1, SE cor. SW, Section 17-12-12; Prairie Oil & Gas Co.'s No. 1, SW cor. SE, Section 5-11-11, Okfuskee County, an old well being drilled deeper, is drilling at 2,980 feet; Windsor Oil Co. spudded No. 3, SE cor. SW NW, Section 22-11-11. Windsor Oil Co. and the Independent Oil & Gas Co. have a rig up for No. 3, NE cor. SW SW, Section 22-11-11, and for No. 4, NW cor. SW SW, Section 22-11-11; Windsor Oil Co. has the rig in for No. 8, SW cor. NW SW, Section 22-11-11; Sands Petroleum Co. is rebuilding the rig for No. 1, SE cor. SW SE, Section 19-12-24, McIntosh County. This is an old well to be drilled deeper. Sterling Oil & Gas Co. is drilling at 450 feet in No. 2, NE cor SE NE, Section 30-12-14.

Okmulgee District Completions

Wigton & Long's No. 3, CSL NW SW SW, Section 3-12-14, McIntosh County, had sand at 1,818-45 feet and is doing 8 bbls. after a shot of 120 quarts.

Deep Fork Oil Co.'s No. 5-A, SE cor. SE, Section 35-12-13, Okmulgee County, had sand at 2,847-74 feet with a hole full of water. It is shut down and may be abandoned.

M. P. Evans has a dry hole in No. 3, NE cor. SW, Section 15-11-12, total depth 3,882 feet.

Wier and others' No. 1, NW cor. SE, Section 4-11-12, had sand at 1,510-57 feet and is making 5 bbls. after a shot of 120 quarts.

Minnehoma Oil Co.'s No. 9, C NE NE, Section 24-11-11, Okfuskee County, had 20,000,000 feet of gas in sand at 2,840-46 feet. It will be drilled deeper.

Windsor Oil Co. has completed No. 7, NE cor. NW SW, Section 22-11-11. Sand was at 2,630-42 feet and the well made 940 bbls. the first 24 hours. No. 6, SE cor. NW SW, Section 22-11-11, had sand at 2,625-39 feet and made 265 bbls. naturally. No. 5, SW cor. NE SW, Section 22-11-11, had sand at 2,530-41 feet and made 400 bbls. Windsor Oil Co. and Independent Oil & Gas Co.'s No. 2, NW cor. SE SW, Section 22-11-11, is good for 360 bbls. from sand at 2,618-29 feet.

Olean Petroleum Co.'s No. 3, CWL east half SE, Section 11-15-12, Okmulgee County, had pay at 2,109-30 feet, water at 2,130-31 feet, total depth. It was plugged back to 2,125 feet and shot with 50 quarts and is doing 25 bbls. of oil and 30 bbls. of water.

Devonian Oil Co.'s No. 1, NE cor. SE NW, Section 14-15-12, had a hole full of water in sand at 2,619-36 feet and was plugged back to 2,630 feet. It had a show of oil and is not completed.

Independent Oil & Gas Co.'s No. 1, NW cor. SW SE, Section 14-15-12, had 10,000,000 feet of gas in sand at 2,130-32 feet and is mudding off to drill ahead.

Paige Brothers' No. 2, NW cor. SW NE, Section 14-15-12, had sand at 2,626-37 feet and is making 90 bbls. after a a shot of 5 quarts.

Papoose Oil Co.'s No. 19, SW cor. NW SW, Section 21-15-14, made 1,042 bbls. the first day from sand at 2,186-92 feet. It is not completed.

Guy Wallace has abandoned the location for No. 20, NE cor. NW NW, Section 8-14-13.

Hutchinson & Becker have a dry hole in No. 5, SE cor. SW NW, Section 20-14-13, at a total depth of 2,695 feet.

Jim Wallace and others' No. 3, SE cor. SW, Section 11-14-14, had a hole full of water at 2,424 feet and was abandoned.

Creek County Completions

Gled Oil Co.'s No. 1, SW cor. NW NW, Section 13-19-8, Creek County, had sand at 2,127-54 feet and is completed, good for 8,000,000 feet of gas and 10 bbls of oil.

Transcontinental Oil Co.'s No. 1, SE cor. NE, Section 24-17-7, had a total depth of 2,097 feet and was plugged back to 2,625 feet and shot with 40 quarts. It is being cleaned out and showing for 3 bbls.

Aztec Oil Co. & Avard's No. 5, C SE SE, Section 24-17-8, had sand at 2,285-2,320 feet and is estimated at 60 bbls. after a shot of 80 quarts.

Olean Petroleum Co.'s No. 6, NE cor. SE NE, Section 32-17-8, had sand at 3,434-74 feet. It was making 574 bbls. naturally and was shot with 140 quarts, producing 940 bbls. the ensuing 24 hours.

Lorraine Petroleum Co.'s No. 3, NW cor. NE SW, Section 23-16-9, had sand at 3,090-3,105 feet, and has 2,500,000 feet of gas. The tools are lost and the well is not completed.

Southwestern Petroleum Co.'s No. 2, SW cor. SE SE, Section 18-14-10, has

(Continued on Page 105)

Kansas Oil Field News

By J. L. Dwyer

The most interesting event of the past week in the Kansas oil fields was the discovery of water in one of the Greenwood County wells. This is a new condition, as the ordinary experience of the operators in this field is that where there is oil found there is seldom water encountered. The well is Jack Robinson and others' No. 3 Scott, NW cor. NE, Section 25-23-8, which had the top of the sand at 2,563-2,617 feet and was shot with 100 quarts. It made 350 bbls. of oil and 10 bbls. of water the first day, and this is the first water found in this region. Jack Robinson and others' No. 1, completed some time ago, is making 3 per cent water at present.

In Chautauqua County, the Mid-Kansas Oil Co.'s well in Section 3-32-8 is standing with 400 feet of oil in the hole. The oil comes from the Wilcox sand, which was topped at 3,110 feet. The oil tested 38 degrees at 90 degrees temperature.

In the Padgett area in Sumner County the Marland Oil Co.'s No. 1 Theissen, an old well which was producing in the upper sand, was drilled deeper and is standing with 150 feet of water in the hole, which has a total depth of 3,808 feet. The 5-inch casing is being underreamed to 3,802 feet. This is a very interesting well and is being closely observed.

In another section of Sumner County the H. F. Wilcox Oil & Gas Co. is underreaming the 6-inch casing at 3,653 feet. This well is in the NW cor. SE, Section 5-32-2w, and the total depth of the hole is 3,880 feet, to which point the pipe will be reamed. It is believed that this well is approaching the critical depth.

In the Butler County the well of Vickers and others, No. 1, NW cor, SE, Section 12-24-3, had the pay in chat at 2,484-2,488 feet and made 38 bbls. the first 7 hours.

In the Russell Pool, the Derby Oil & Refining Co., of Wichita, is running some of the crude to its refinery at Wichita by means of tank cars.

Greenwood County Completions

Mid-Continent Petroleum Co.'s No. 2 CWL NW SE Section 14-23-13, Greenwood County, was shot in sand at 1,783-1,808 feet and is good for 5 bbls.

Phillips Petroleum Co. completed No. 6, CNL SW, Section 33-22-11, in sand at 1,896-1,945 feet and it started at 25 bbls. after a shot of 180 quarts.

Empire Gas & Fuel Co. has a dry hole in No. 4, SW cor. NW NE, Section 32-22-11, total depth 2,054 feet.

Phillips Petroleum Co.'s No. 1, SE cor. SW SW Section 29-22-11, found the top of the sand at 1,960 feet, first oil at 1,975 feet, total depth 1,994 feet. After a shot of 40 quarts it is making 50 bbls. and 50 bbls. of water.

Syndicate Oil Co.'s No. 6, CSL NE SW NE Section 28-22-11, had pay at 1,970-80 feet and is doing 100 bbls. after a shot of 40 quarts.

Empire Gas & Fuel Co. completed No. 1, SE cor. NW Section 12-22-11. It was plugged back from 1,860 feet to sand at 1,772-78 feet and is good for 5 bbls. after a shot of 40 quarts.

Davis, Hazlett and others' No. 5, NE cor. SW SW Section 7-22-11, made 60 bbls. naturally in sand 2,060-2,114 feet.

(Continued on Page 108)

What's become of the "Chain Basket"?

Some of the old oil field men can still remember the "chain basket." It was once a prominent part of many a drilling rig. Three or four times a day the "chain basket" was used to gather up the links of the old detachable chains that flew in all directions every time a chain broke.

The "chain basket" passed into history when Rex, the Genuine Chabelco, came into the oil fields.

Rex, the Genuine Chabelco, wears out instead of breaking up. It does not stretch, but runs true over the sprockets month after month. Rex Chabelco has constantly met the demand for stronger chain that came with bigger diameter bores, deeper wells and more rapid drilling.

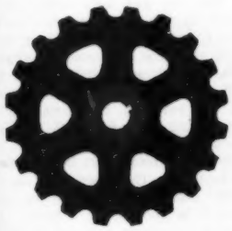
As fast as a better chain was needed, a better Rex Chabelco has been ready for the oil fields.

That is why every oil field man who has carried the "chain basket" swears by Rex, the Genuine Chabelco, the oil well chain that wears out instead of going to pieces.

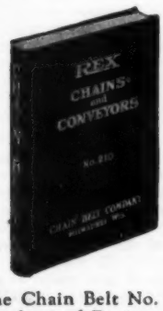
Rex, Genuine Chabelco, fits standard sprockets and holds its pitch. It does not stretch.

At left: strand of **REX** *genuine Chabelco 1030.*

Rex Safety Set Collar made of Certified Malleable Iron. Though stronger and more durable, it weighs only about half as much as a cast iron collar. Typical of the complete Rex transmission line.



Rex Temperim Sprocket Wheels have teeth and rim hardened to provide a harder surface of a tougher and more durable nature than the ordinary grey iron wheel.



The Chain Belt No. 210 Catalog and Engineering Data Book shown above consists of 512 pages. It lists in detail all information for the ordering and use of Rex Chain, Conveyors and Transmission Machinery.

GET GENUINE **REX** 1030 AND 1240

CHABELCO

CHAIN BELT COMPANY

1000 Keystone Building, *Houston, Texas* — *719 Park Street, Milwaukee, Wis.* — 210 So. San Pedro Street, *Los Angeles, Calif.*

North Louisiana-Arkansas

By M. L. Vaughn

Production shows trend upward in both Arkansas and North Louisiana fields. Union County completions mostly in Graves and deeper sand area of south end of Smackover. Sixteen completions in north end with aggregate initial production of 11,410 bbls. Stephens gasser considered probably important.

SHREVEPORT, La., Aug 3. — Production took an upward trend during the past week, both Arkansas and North Louisiana showing an increase in daily outputtt. Daily production in the North Louisiana Field averaged 50,053 bbls., an increase of 710 bbls. a day, and Arkansas production averaged 241,275 bbls. daily, an increase of 1,400 bbls. daily. Total production of the combined fields averaged 291,328 bbls., distributed as follows:

North Louisiana	
Bellevue	3,110
Caddo light	9,040
Caddo heavy	2,627
Cotton Valley	10,980
De Soto and Red River	4,115
Elm Grove	596
Haynesville	12,870
Homer	6,705
Total	50,053
Arkansas	
Smackover heavy	201,390
Smackover light	27,730
El Dorado	8,805
Nevada County	1,580
Stephens	1,770
Total	241,275
Total both fields	291,328
Increase	2,110

The big gas well which blew in last week in the Stephens district, in Ouachita County, Arkansas, has bridged over and its final outcome is still in doubt. The well was drilled by the Buffalo Oil Co., in Section 22-15-19, on the outskirts of the town of Stephens, for which the producing oil field, 2 miles west, is named. It blew in with an initial production estimated at 20,000,000 feet, presumably in the Nacatoch sand, at 2,121 feet, practically destroying the derrick, which is now being rebuilt. Intense interest has been aroused in the Stephens territory by this development as it is the first gas well of any importance and indicates a probability of important production from the Blossom sand. Heretofore only small pumpers from the Nacatoch sand have been completed in this district.

More than $177,000 was derived from gasoline and oil taxes by the State treasury in Arkansas during the month of June. Among the largest taxpayers were the Standard Oil Co., which paid approximately $69,000; the Magnolia Petroleum Co., $50,000; the Lion Oil & Refining Co., $22,000; the Gibson Oil Co., $15,000, and the Gay Oil Co., $7,000.

Completions

Union County, Arkansas

Completions in Union County, Arkansas, were, with few exceptions, in the Graves and deeper sand area in the south end of the Smackover Field, operations of the week resulting in the completion of 21 wells of which 3 were failures, 2 gas wells and 16 oil wells with an aggregate initial production of 9,220 bbls. Both gassers were tests to the 2,700-foot sand, one making 15,000,000 feet with a spray of salt water at 2,732 feet, and the other the same amount of gas with 5,000 bbls. of salt water at 2,745 feet.

Only one producer was completed in the Blossom sand, J. W. Clark's No. 3 Palmer, Section 9-16-15, owing 700 bbls. at 2,654 feet.

W. H. Gilliland's No. 1 Rice, Section 7-16-16, made a 150-bbl. pumper at 2,292 feet.

Gulf Refining Co. completed No. 10 J. A. Berry, Section 8-16-15, pumping 150 bbls. at 2,370 feet; No. 15 T. C. Murphy, Section 9-16-15, pumping 195 bbls. at 2,407 feet, and No. 16 T. C. Murphy, same section, pumping 125 bbls. at 2,448 feet.

Higgins Oil & Refining Co.'s No. 2 McGraw, Section 6-16-16, made a 175-bbl. pumper at 2,288 feet.

O. L. Hickman completed No. 1 Graves, Section 3-16-15, flowing 500 bbls. at 2,554 feet.

Hollifield and others completed No. 1 Giller, Section 10-16-15, pumping 200 bbls., 8 per cent salt water, at 2,398 feet.

W. M. Jones completed No. 2 Cook, Section 16-16-15, making 15,000,000 feet of gas with a spray of salt water at 2,732 feet.

Lion Oil Refining Co. completed Lawton B-4, Section 10-16-15, pumping 200 bbls., 60 per cent salt water, at 2,454 feet.

Mazda Oil Co.'s Lawton B-1, Section 10-16-15, came in flowing 1,500 bbls., 90 per cent salt water, at 2,723 feet.

Magnolia Petroleum Co.'s No. 1 N. J. Murphy, Section 35-16-16, was abandoned at 2,780 feet.

Natural Gas & Petroleum Co. completed No. 1 Houston, Section 12-16-16, making 15,000,000 feet of gas with 5,000 bbls. of salt water, at 2,745 feet.

A. H. Ramage junked the hole and abandoned Lawton C-6, Section 10-16-15, at 2,560 feet.

Sun Co.'s No. 2 Hatfield, Section 6-16-15, is swabbing 500 bbls. at 2,376 feet.

Sure Oil Corp. completed No. 7 Flenniken, Section 5-16-15, pumping 300 bbls. at 2,380 feet.

The Texas Co. completed No. 2 Langley, Section 7-6-16, pumping 125 bbls., 14 per cent b. s. and water, at 2,310 feet.

Thurman et al are blowing No. 5 Wilson, Section 6-16-15, with air, making 1,200 bbls., 80 per cent salt water, at 2,389 feet.

United Central Oil Corp. completed No. 6 Murphy, Section 8-16-15, flowing 3,000 bbls. at 2,520 feet.

Unity Petroleum Co.'s No. 7 Bilyew, Section 8-16-15, made a 200-bbl. pumper at 2,383 feet.

Wetherbee et al junked and abandoned No. 3 McGraw, Section 7-16-16, at 2,542 feet.

Ouachita County, Arkansas

Completions in the Ouachita County, Arkansas, area, in the north end of the Smackover Field, numbered 16, of which 4 were failures and 12 oil wells with an aggregate initial production of 11,410 bbls. In the Blossom sand, J. H. Meek, Trustee, completed No. 5 Laney, Section 31-15-15, flowing 500 bbls. at 2,600 feet, and the Phillips Oil Corp. completed No. 9 Laney, in the same section, flowing 250 bbls. at 2,559 feet. The Louisiana Oil Refining Corp. abandoned No. 2 Alexander, Section 22-15-17, at 2,664 feet.

Gulf Refiining Co. completed No. 7 R. Bennett, Section 33-15-15, flowing 500 bbls. at 2,387 feet, and Umsted A-17, Section 33-15-15, flowing 600 bbls. at 2,365 feet.

Humble Oil & Refining Co. junked the hole and abandoned No. 3 Jones-Umsted, Section 4-16-15, at 2,352 feet, and No. 8 Laney, Section 32-15-15, at 2,040 feet, and got a 400-bbl. pumper at 2,378 feet in No. 4 F. Murphy, Section 3-16-15.

Invaders Oil Co.'s No. 7 Hill, Section 5-16-15, made a 175-bbl. pumper at 2,373 feet.

Louisiana Oil Refining Corp. abandoned No. 2 Alexander, Section 22-15-17, at 2,664 feet.

Marine Oil Co.'s No. 7 Hays, Section 4-16-15, is pumping 300 bbls. at 2,363 feet.

Miles et al completed No. 4 Neeley, Section 26-15-16, pumping 35 bbls. at 2,043 feet.

Owenwood Oil Corp. completed No. 6 Snyder, Section 34-15-15, pumping 100 bbls. at 2,367 feet.

Sinclair Oil Co.'s No. 7 Berry, Section 33-15-15, was junked and abandoned at 2,435 feet.

Standard Oil Co. is blowing No. 10 McClanahan, Section 6-16-15, with air, making 3,500 bbls. at 2,397 feet, 93 per cent salt water.

Sure Oil Corp.'s No. 4 Joyce, Section 34-15-15, is swabbing 450 bbls. at 2,380 feet.

Wilroy et al completed No. 1 Berg, Section 32-15-15, flowing 100 bbls. at 2,399 feet.

Cotton Valley, Louisiana

Only one well was completed in the Cotton Valley district, Webster Parish, Louisiana, during the week, the Ohio Oil Co. getting a 100-bbl. pumper at 2,563 feet in No. 13 Gray, Section 26-21-10.

Bienville Parish, Louisiana

Brown & Evans tried to pull the 8-inch casing in No. 1 Miles, Section 20-18-7, Bienville Parish, Louisiana, pulled derrick in and have abandoned the test at 2,915 feet.

Caddo Parish, Louisiana

The Austin Oil Co. completed No. 19 Peak, Section 23-22-15, in the Hosston district, Louisiana, pumping 12 bbls. at 1,065 feet.

Lafayette County, Arkansas

The Humble Oil & Refining Co. abandoned No. 1 Bradshaw, Section 26-16-25, at 1,406 feet.

Miller County, Arkansas

The Humble Oil & Refining Co. tested dry at 1,765 feet in No. 1 Fouke, Section 35-16-27, and the test was abandoned.

Union County, Ark., Drilling

Drilling activity in Union County remains practically unchanged, with 140 drilling wells, 6 rigs, and 29 derricks at the close of the week. A majority of the wells are being drilled to the Graves sand, with numerous tests to the Blossom sand scattered throughout the field.

Amerada Petroleum Corp. is drilling at 2,050 feet in No. 6 Calloway, Section 4-16-15; No. 5 Giller, Section 15-16-15, coring at 2,417 feet, and No. 10 Lyell, Section 3-16-15, coring at 2,455 feet and derrick up for No. 11 Lyell, same section. Arkansas Fuel Oil Co. bailing to test 24 feet of sand at 2,295 feet in No. 4 Murphy, Section 8-16-15, and drilling at 2,485 feet in No. 3 Spahr, Section 35-15-16.

Baggett and others drilling No. 1 Houston, Section 12-16-16, at 2,480 feet; Nick Barbara, drilling No. 1 Houston, Section 12-16-16, at 1,900 feet; Bonderant and others down 50 feet in No. 1 Garner, Section 8-18-12; R. A. Bristol, drilling No. 1 Parkerson, Section 1-16-16, at 2,300 feet; Broderick & Calvert drilling No. 1 Bradford, Section 8-16-15, at 1,910 feet, and Brooks, trustee, drilling No. 1 Murphy, Section 13-16-16, at 2,350 feet.

Coates & Sowell, drilling No. 3 Bilyew, Section 8-16-15, at 2,350 feet; Constant Refining Co., drilling at 2,190 feet in No. 3 Goodwin, Section 36-17-16; Crawford & Sebastian, setting 4½-inch at 2,552 feet in No. 8 James, and at 2,558 feet in No. 9, Section 6-16-15, rigging up to drill deeper in No. 6 Giller, Section 14-16-15, abandoned at 2,283 feet on account of salt water, and down

SMACKOVER PRODUCTION INCREASED BY 10,000-BBL. GRAVES SAND WELL

EL DORADO, Ark., Aug. 3.—The largest well of the week in the Smackover Field was the Sinclair Oil & Gas Co.'s No. 10 Berry, SW NE NW, Section 33-15-15, which started at 10,000 bbls. a day from the Graves sand at 2,374-78 feet. The Texas Co.'s No. 7 Alphin, NW NE SE, Section 3-16-15, was deepened 1 foot with cable tools and is now flowing 3,000 bbls. from sand at 2,544-50 feet. Murray & Bailey's No. B-1 Rhotem, NE SE SW NW, Section 32-15-15, is now flowing 5,000 bbls. of fluid, of which 75 per cent is water; sand at 2,571-99 feet.

Deep sand production continues to climb nearly every day and the report issued last night for the 24 hours ending Friday morning showed an estimated output of 164,760 bbls. from 606 completions, of which 153 were dead, 332 pumping, 43 blowing, with gas or air, and 45 showing over 75 per cent water and sediment. The 453 producing wells in the Graves, Lawton and Blossom sands were averaging 364 bbls. a day, but basing the average on the total number of oil wells completed since the deep sand was opened early in the year, the average per well is 271 bbls. per well.

Freight Rates Reduced

Reduction of the freight rate on shipments of crude, refined and fuel oils from the El Dorado district to Indiana points was announced Thursday. The new schedule was posted, according to a telegram received by P. G. Anderson, traffic manager of the Chamber of Commerce, at a meeting of carriers and shippers held Wednesday before the Central Freight Association, at Chicago.

Representatives of the Interstate Commerce Commission, in the hearing on the proposed reduction, recommended the lower rates and the carriers agreed. The schedule will become effective within 30 or 40 days. On shipments of refined oil from this territory to Indianapolis, the freight rate was reduced from 49½ cents to 40 cents per hundredweight; to Kokomo, the rate was reduced from 50 cents to 42 cents per hundred, and to Columbus, a reduction from 46½ cents to 38½ cents was allowed.

The rate on crude and fuel oil from El Dorado to all Indiana stations was reduced 6½ cents, establishing the schedule in effect from Oklahoma fields to the same market. Since Indiana uses more fuel oil than any other inland State, local operators will reap the benefits to be derived from a rate that places them on a competitive basis with Oklahoma producers.

Many Wells in Sand

The business of drilling to the sands below the Graves is being pursued very carefully. Scores of wells are on top of the sand or in sand and every well below the Graves is being drilled slowly for fear of an error of judgment that may mean the destruction of the well by gas. Wells reported coring and testing two and three weeks ago are not yet completed and this week others are being added to the list.

White and others' No. 1 Martin, SW SW, Section 26-15-15, is drilling plug

(Continued on Page 104)

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS

A Perfection installation that saved its owner thousands of dollars

Question: IN THE PURCHASE OF A BATTERY OF PERFECTION VAPOR PRESSURE TANKS, CAN I BE ASSURED OF ANY CERTAIN SAVING THAT WILL JUSTIFY ME IN EXPECTING THE TANKS TO PAY FOR THEMSELVES WITHIN A REASONALBE LENGTH OF TIME?

Answer: You certainly may.

Time after time customers have written us that the saving from evaporation has amounted to thousands of dollars within a year. One well known producer makes an affadavit that his tanks pay for themselves 12 times a year.

And remember that when the Perfection Vapor Pressure Flow tank is used as a gas separator, the sale of gas to the nearest gasoline plant, the use of gas as lease fuel, wipes out the entire cost of the battery in a remarkably short time.

Yes, we are sure that this big saving accounts for the fact that Perfection tanks usually outnumber all single makes in most fields, and all others combined in several.

Black Sivalls & Bryson
INC.

BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

50 feet in No. 8 Graves, Section 3-16-15. Rowe-Daniels tested at 2,438 feet in No. 4 Tatum, Section 7-16-15, getting a show of oil and salt water and setting packer, and drilling at 2,080 feet in No. 5 Tatum, same section. Doern and others reaming to bottom of hole at 2,110 feet in No. 1 Fletcher, Section 4-19-16; Eason and others tested salt water and fishing for liner at 2,482 feet in No. 5 Murphy, Section 15-16-15, and No. 4 Palmer, Section 9-16-15, blew in at 2,643 feet, making 30,000,000 feet of gas.

Federal Petroleum Co. is rigging up to drill deeper in No. 6 Flenniken, Section 6-16-16; George & Jones, drilling at 2,100 feet in No. 5 Murphy, Section 18-16-15; Gulf Refining Co. has two rigs running on the J. H. Alphin lease, Section 10-16-15, and two on the M. Alphin, Section 2-16-15; tested salt water and fishing at 2,608 feet in No. 9 J. A. Berry, Section 7-16-15, arranging to pump No. 2 Fagg, Section 7-16-15, at 2,350 feet, and rigging up to drill No. 3, same section; drilling No. 1 Howard, Section 13-16-16, at 2,650 feet; drilling No. 7 LeCroy, Section 16-16-15, at 2,455 feet; four rigs running on the Hardy-Murphy lease, Section 3, 4 and 5-16-15; arranging to pump No. 19 T. C. Murphy and drilling at 2,330 feet in No. 20, Section 9-16-15; drilling at 1,150 feet in No. 3 T. D. Murphy, Section 7-16-15, and arranging to pump No. 39 Werner and rigging up to drill No. 40, Section 6-16-16.

Higgins Oil & Fuel Co. set 10-inch at 60 feet and drilling at 1,150 feet in No. 3 McGraw, Section 7-16-16; Hollyfield and others, drilling at 2,485 feet in No. 12 Giller, Section 10-16-15; Houston Oil Co., drilling No. 5 Milner, Section 3-16-15, at 2,428 feet; Humble Oil & Refining Co., setting casing with packer at 2,375 feet in Flenniken A-6, Section 3-16-15, drilling at 2,590 feet in No. 3-A Lawton, Section 7-16-15, and at 1,990 feet in No. A-4, Section 7-16-15; and Imperial Oil & Gas Co. set 10-inch at 100 feet in No. 8 Murphy, and drilling at 2,000 feet in No. 9, Section 9-16-15.

Johnson Drilling Co. set 6-inch at 2,223 feet in No. 4 Anderson, Section 1-16-17; Keene & Wolf tested salt water at 2,630 feet in No. 1 Bradford, Section 7-16-15, plugged back 2 feet and testing 2 feet of sand at 2,628 feet; Laurel Oil & Gas Co., drilling at 2,440 feet in No. 2 Houston, Section 12-16-16, and Liberty Oil Co. fishing at 1,250 feet in No. Davis, Section 31-16-15. Lion Oil & Refining Co. set 6-inch at 2,500 feet in No. B-1 Bilyew and drilling at 1,375 feet in No. C-4, Section 8-16-15; rigging up to drill deeper in No. 4 Graves, Section 3-16-15; arranging to pump No. 3 Hays, Section 4-16-15; drilling at 2,475 feet in No. A-7 Lawton, Section 10-16-15; coring at 2,475 feet in No. 1 LeCroy, Section 16-16-15, and has seven rigs running on the Murphy lease, Section 7-16-15.

Magnolia Operations

Magnolia Petroleum Co. drilling No. 5 Campbell, Section 13-16-17, at 1,115 feet, and No. 1 Chandler, Section 4-19-14, at 3,065 feet; Mazda Oil Co. drilling No. R-4 Lawton, Section 10-16-15, at 2,500 feet; McMurray and others, arranging to pump No. A-1 Wingfield, Section 8-16-15, at 2,365 feet; Moco Oil Corp., drilling plug at 2,362 feet in No. 2 Flenniken, Section 5-16-16, and drilling at 1,980 feet in No. 4, same section. Murdock and others tested salt water at 2,380 feet and drilling deeper in No. 7 Hays, Section 4-16-15.

Natural Gas & Petroleum Co. is arranging to abandon No. 2 Ballard, Section 15-16-15, on account of a fishing job at 2,547 feet, lost the hole and at 510 feet arranging to move over in No. 4 Ballard, Section 15-16-15; arranging to abandon No. C-2 Lawton, Section 10-16-15, at 2,440 feet; drilling at 1,487 feet in No. C-3 Murphy, and rigging up to drill No. D-4 Murphy, Section 8-16-15. Ohio Oil Co. drilling at 1,660 feet in No. 1 Arkansas Timber & Land Co., Section 21-18-10, and drilling at 2,300 feet in No. 11 Murphy, Section 10-16-15.

G. H. Pace is rigging up to drill No. 1 Barnett, in Section 11-16-18, half way between Stephens and Louann districts.

Parrish and others lost the hole at 2,000 feet in No. 3 Ferguson, Section 6-16-15, and moving over; Penguin Oil Co. milling out junk at 2,500 feet in No. 3 Murphy-Sanford, Section 6-16-15; Phillips Petroleum Co. drilling at 2,565 efet in No. A-6 Alphin, Section 11-16-15, at 2,190 feet in No. 12 Giller, Section 10-16-15; at 2,550 feet in No. 2 Thompson, and at 2,150 feet in No. 4, Section 7-16-15; and Pure Oil has two rigs running on the Bilyew lease, Section 8-16-15, set 4-inch at 2,390 feet in No. 5 Merriwether, Section 6-16-15, and fishing job at 2,270 feet in No. 4 Friend, same section.

Raines and others have derrick up for No. 1 Dumas, Section 9-17-16, and A. H. Ramage for No. C-9 Lawton, Section 10-16-15, and drilling at 2,030 feet in No. 10 James, Section 6-16-15; Joyce Richardson drilling at 1,010 feet in No. 3 Bradford, Section 8-16-15; Sam Richardson drilling at 2,000 feet in No. 4 Lawton, Section 10-16-15; Riggs Drilling Co. arranging to drill deeper in No. 1 Wingfield, Section 5-16-15, and Rogers and others in No. 3 LeCroy, Section 17-16-15, and Rutledge, trustee, down 50 feet in No. 2 Carruth, Section 7-16-16.

Simms Oil Co. Work

Simms Oil Co. drilling at 2,550 feet in No. 9 Cook, Section 16-16-15; Smitherman-McDonald coring No. 1 Dumas, Section 23-16-16, at 2,370 feet; Standard Oil Co. has four rigs running on the M. W. Hardy lease, Sections 4, 9 and 10-16-15; Jim Stock has a fishing job at 2,865 feet in No. 1 Polk & Ezell, Section 18-17-14; Sun Oil Co. drilling at 2,393 feet in No. 4 Hays, Section 3-16-15, and at 2,555 feet in No. 3 McClannahan, Section 1-16-16; Sunny Jim Oil Co. is arranging to set 4½-inch casing at 2,693 feet in No. 1 Flenniken, Section 9-16-15, and A. M. Sutton has 800 feet of fluid in the hole in 27 feet of sand at 2,380 feet in No. 1 Wingfield, Section 5-16-15.

The Texas Co. is drilling No. 7 Calloway, Section 4-16-15, at 1,050 feet, arranging to deepen No. 7 and No. 8 Graves, Section 3-16-15, and arranging to test 12 feet of sand at 2,355 feet in No. 4 Hays, Section 4-16-15; Thurman and others tested salt water at 2,420 feet and drilling at 2,460 feet in No. 1 Houston, Section 12-16-16, and drilling at 2,350 feet in No. 3 Wingfield, Section 5-16-15; Tidal-Osage Oil Co. set 4½-inch casing at 2,672 feet in No. 5 Vestal, Section 17-16-15; Unity Petroleum Co. drilling at 1,800 feet in No. B-8 Bilyew, Section 8-16-15, and set 4½-inch casing at 2,363 feet for a shallow test in No. 6 Roper, Section 3-16-15; Vance and others down 250 feet in No. 1 Kane, Section 12-16-16; Ward and others fishing at 2,618 feet in No. 1 Goodwin, Section 16-16-15, and Wetherbee and others rigging up to drill No. 3 McGraw, Section 7-16-16.

Ouachita County, Arkansas

There has been very little new activity in the Ouachita area of the Smackover Field during the past week, there being the same number of wells, 130, drilling this week as last; 35 derricks this week, 32 last week, and two new locations, over one last week. The following companies have wells drilling in the Blossom sand: Atlantic Oil Producing Co.'s No. 5 Berg, Section 30-15-15; Duho Oil Co.'s No. A-1 M. McKenzie, Section 36-15-16; El Dorado Union Oil Co.'s No. 1 Eagle Lumber Co., Section 17-12-15, and the Simms Oil Co.'s No. 9 Hildebrandt, Section 28-15-15.

The Arkansas Fuel Oil Co. plugged back to 2,598 feet from 2,604 feet in their No. 5 B. T. Laney, Section 31-15-15, and are waiting on cement; commenced drilling on No. 9 Snyder, Section 34-15-15, July 12, and shut down at 312 feet, account no water.

The Atlantic Oil Producing Co. set 10-inch casing at 520 feet in No. B-4 Rhoten, same section, and down 1,400 feet; Clark & Melat arranging to deepen No. 3 Murphy, Section 4-16-15, after testing salt water, with show of oil; Colcord and others have two rigs running on the Laney lease, Section 31-15-15.

J. E. Crosbie is coring at 2,552 feet in No. 10 Berry, Section 33-15-15; drilling at 2,340 feet in No. 12 Berry, same section; Cumberland Petroleum Co. is down 2,100 feet in No. 2 Elliott, Section 29-15-17; El Dorado Union Oil Co. is drilling at 2,650 feet in No. 1 Eagle Lumber Co., Section 37-12-15.

Giles and others set 6-inch casing at 1,984 feet in No. 3 Neely, Section 26-15-16; Gilliland Oil Co. is down 1,953 feet in No. B-6 Myar, Section 30-15-17.

The Gulf Refining Corp. set 10-inch casing at 598 feet in No. 8 R. Bennett, Section 33-15-15; drilling at 2,165 feet in No. 5 S. Bennett, Section 33-15-15; drilling at 2,165 feet in No. 5 S. Bennett, Section 32-15-15; set 10-inch casing at 277 feet in No. 18 Flenniken, Section 5-16-15; three rigs running on the B. Goodwin lease, Section 32-15-15; two rigs running on the J. Goodwin lease, Section 32-15-15; No. A-9 J. Goodwin, Section 5-16-15, waiting on Standard rig with 1,000 feet of oil and 12 feet of sand in the hole at 2,379 feet; bailing to test 13 feet of sand at 2,370 feet in No. A-10 J. Goodwin, same section; coring at 2,565 feet in No. 5 Umsted, Section 32-15-15; three rigs running on the Umsted lease, Section 33-15-15; rigging up No. 2 Scott, Section 34-15-15.

Houston Oil Co. set 10-inch casing at 402 feet in No. 9 Hinton, Section 5-16-15, and down 1,160 feet; drilling No. 9 B. T. Laney, Section 31-15-15, at 2,443 feet; three rigs running on the Reynolds lease, Section 27-15-15; Howell and others have two rigs running on the Williams lease, Section 3-16-15.

Humble's Operations

The Humble Oil & Refining Co. is down 1,979 feet in No. 3 Arnold, Section 26-15-16; drilling at 2,109 feet in No. 6 Farris, Section 34-15-15; down 2,585 feet in No. 4 F. A. and B. T. Laney, Section 31-15-15; set 10-inch casing at 511 feet in No. 3 H. Laney, Section 31-15-15, and swabbing to test 15 feet of sand at 2,374 feet in No. 5 F. Murphy, Section 3-16-15.

The Imperial Oil Producing Co. set 12-inch casing at 499 feet in No. 10 McClanahan, Section 6-16-15; E. M. Jones down 2,360 feet in No. 1 Wilson, Section 26-15-18; Louisiana Oil Refining Corp. waiting on standard rig at 2,347 feet in No. 2 Tyson, Section 27-15-17, with 200 feet of oil and 7 feet of sand in the hole Magnolia Petroleum Co. has three rigs running on the J. Goodwin lease, Section 5-16-15; Marine Oil Co. plugged back to cut off salt water in No. 5 Snyder, Section 34-15-15, and fishing drill collar at 2,354 feet; set 6-inch casing at 2,512 feet in No. 9 Umsted, Section 5-16-15.

J. H. Meek, trustee, is down 1,310 feet in No. 6 Laney, Section 31-15-15; Natural Gas & Petroleum Co. set 6-inch casing at 2,363 feet in No. A-4 Hill, Section 5-16-15, and two rigs running on the Laney lease, Section 31-15-15; Ohio Oil Co. down 2,570 feet in No. 5 Goodwin, Section 29-15-15; set 10-inch casing at 162 feet in No. 3 Lewis, Section 29-15-15, and derricks up for Nos. 4 and 5 Lewis, same section.

The Owenwood Oil Corp. tested salt water under 6⅝-inch casing in No. 10 Snyder, Section 34-15-15, and cemented 4½-inch casing at 2,373 feet; Penguin Oil Co. waiting on standard rig with 1,000 feet of oil and 108 feet of sand in the hole at 2,368 feet in No. 3 Umsted, Section 4-16-15.

The Phillips Petroleum Co. has five rigs running on the Joyce lease, Section 33-15-15; fishing drill stem at 2,553 feet in No. 10 Laney, Section 31-15-15; set 10-inch casing at 300 feet in No. 11 Laney, same section, and derrick up for No. 12 Laney, also Section 31-15-15; Pure Oil Co. down 1,865 feet in No. 5 Brister, Section 28-15-15, and drilling at 245 feet in No. 9 Brister, same section.

The Roxana Petroleum Corp. is drilling at 1,940 feet in No. 1 Avera, Section 35-15-15; set 6-inch casing at 2,580 feet in No. 4-A Bennett, Section 32-15-15; down 2,238 feet in No. A-3 Bennett, same section; set 10-inch casing at 479 feet in No. 1-A Laney, Section 31-15-15; down 2,447 feet in No. 1 Reynolds, Section 27-15-15; down 2,447 feet in No. 3 Williams, Section 34-15-15.

The Shreveport Oil Corp. set 10-inch

(Continued on Page 104)

New Mexico Field Operations

By Staff Correspondent

ARTESIA, N. Mex., Aug. 1.—A quarter mile extension to the northeast of the big Maljamar and Snowden-McSweeney-McNutt producers, has been made by the drilling in of the Dome Oil Co.'s No. 1, which is located in the SE cor. NW SW, Section 21-18-28. The pay in the new producer was picked up at 2,132 feet, which considerably deeper than the producers to the south. Other producers to be completed are the Snowden-McSweeney-McNutt No. 3, in Section 21-18-28, which good for 250 bbls.; the Rotary Oil Co.'s No. 2, in Section 29-18-28, which was given a shot of 500 quarts, which caused the oil to rise 400 feet in the hole, and Flynn, Welch & Yates' No. 20, in Section 32-18-28, which was shot with 120 quarts of glycerin. Five feet of oil sand has been found in the Sandburg & Fisher's No. 1, in Section 18-18-28, at a depth of 2,063 feet.

Of considerable importance to the field will be the drilling of a deep test in the center of the pool, for which a fund is now being raised among producers and operators. It is the intention to deepen the No. 1 well of Compton Brothers, in Section 16-18-28, which proved dry at 2,300 feet. A standard derrick will be erected and the hole carried down to 4,000 feet unless a shallower production be obtained.

Look for Deeper Pay

It is the opinion of many geologists who have worked the local field, that a deeper and more prolific sand will be found. In the Ohio Oil Co. well in Section 34-21-26, west of Carlsbad, 700 feet of sand was found from 2,700 to 3,400 feet. This, however, carried neither water nor oil. This is the same sand found in the Blue Bird well, in the same area. Should such a body of sand be found below the present producing area in the Artesia Pool, it would likely mean large production, according to geologists. Not satisfied with the showing of his No. 1, in Section 35-18-28, D. C. Cheesman is also carrying his hole down and is now drilling below 2,700 feet.

In Snowden & McSweeney's No. 1, on the McNutt permit, in Section 4-21-30, potash salts were uncovered, these closely resembling the potash of the Big Lake Field, which is considered an excellent indication. Fast time is being made on this wildcat, which is now drilling below 1,750 feet. Another wildcat is rigging up to the east of this test, J. C. Covert's No. 1, Section 15-21-30. The hole will be carried to 3,000 feet, according to the contract.

Pipe line runs for the Artesia Pool, are now above 3,000 bbls. daily. This, together with the oil being used for fuel and that which is going into storage, put the production, it is estimated, over 5,000 bbls. daily.

Oil royalties to the State show that July will be close to four times greater than May. Figures issued by the State show May $5,260, June $9,132, and July estimated at $21,000.

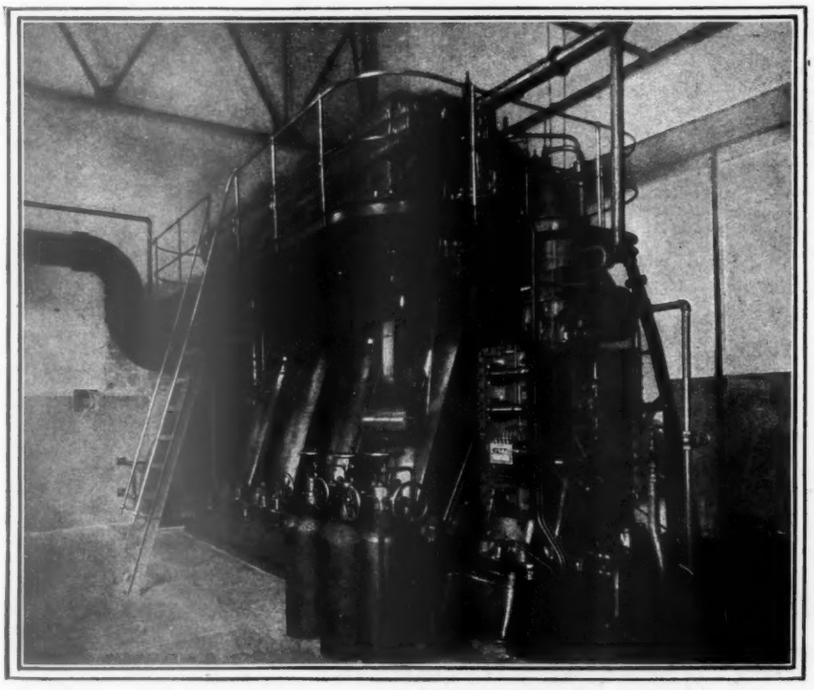
Drilling Report

Anott & Gross' No. 1 of the Los Angeles-New Mexico Oil Co., drilling at 2,385 feet; Bailey & Cragin's No. 1 Randolph permit, shut down at 2,100 feet; Braden Oil Co.'s No. 1, set 6-inch casing at 2,015 feet, drilling; P. L. Bixby's No. 1, on production; Colorado Drilling Co.'s No. 1 Irvin, set 10-inch at 551 feet; California Oil Co.'s No. 1, of A. R. Goodale, shut down; Dome Oil Co.'s No.

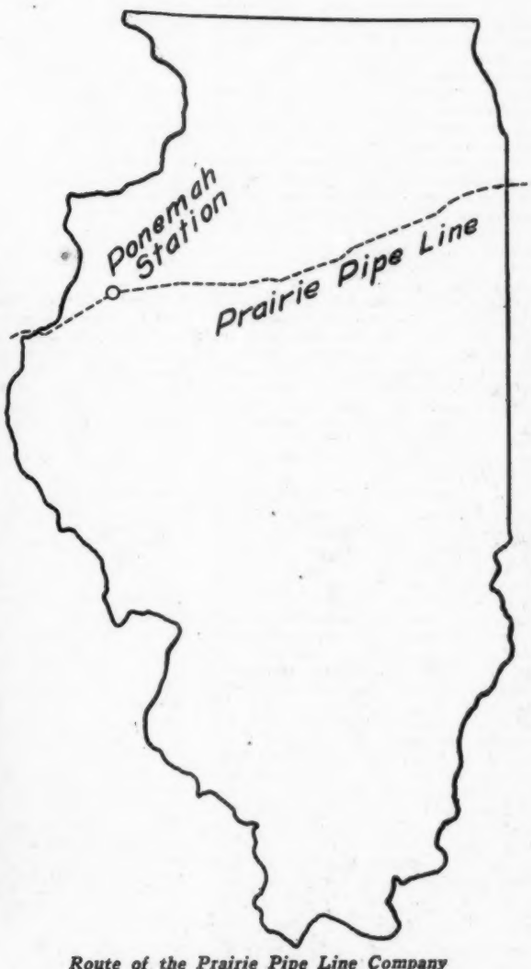
(Continued on Page 108)

FULTON DIESEL

In Pipe Line Service



550 B. H. P. FULTON-DIESEL in Ponemah Station



Route of the Prairie Pipe Line Company across the State of Illinois

In 1921 The Prairie Pipe Line Company installed a 4-cylinder, 550 B. H. P. FULTON-DIESEL in its station at Ponemah, Illinois. Demand for power grew and in 1921 a second unit of the same size and type was installed. Should you visit Ponemah Station you would find the FULTON-DIESELS "on the line."

Pipe Line Service—demanding that no link in the long pumping chain fail—is a service to which the FULTON-DIESEL is particularly well adapted. Its recommendation is based upon careful selection of material of manufacture, conservative rating (low brake mean effective pressure) and heavy duty design and construction.

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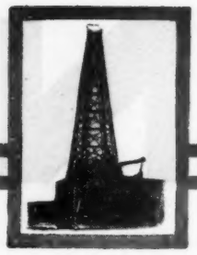

Southwest Texas Fields

By Special Correspondent

O'Hern and Putnam get gas and oil showing in Webb County well, arousing special interest. O. W. Killiam's No. 3 Benavides in Cole Field is a 40,000,000-foot gasser. Magnolia Petroleum Co.'s No. 1 Kime, Milam County, to drill in this week, is thought to have hit the Edwards lime low.

SAN ANTONIO, Tex., Aug. 3.—O'Hern & Putnam, setting casing at 2,075 feet in No. 1 de la Garza on Survey 336 in Webb County, with a sand showing both oil and gas, and No. 1 Holbein of Kirkpatrick & Lucas in Jim Hogg County successfully closed in as a gasser after running wild for a month and at the last spraying a very little oil, are two of the features of major importance in the South Texas district the past week. Added to them is the completion in the Cole field of O. W. Killam's No. 3 Benavides on Cole Petroleum Co. acreage as a gasser estimated at somewhere around 40,000,000 feet.

O'Hern & Putnam's test is north and a little east of the Carolina Texas wells, which are big producing wells, most or all of them carrying some casinghead gasoline. Wildcatters have been circling the gas wells in the hope of picking up oil production. One such well completed as a gasser is making a few gallons of crude oil. Anticipation is such that every well with any chance to make an oil well is watched very closely.

No. 1 Las Animas of Kirkpatrick & Lucas, reported shut in a week ago, was premature; it was shut in Thursday. It is 1½ miles north of the Jim Hogg County Pool, and when closed in the well was spraying a very little oil. Inasmuch as the discovery well of the Jim Hogg Pool was located by moving off the gas structure a little to the east from a big gas well, the new Kirkpatrick & Lucass No. 1 Las Animas is offering interesting possibilities for that field.

The completion of the third of O. W. Killam's gas wells in the Cole Field and the sixth in the field which is northeast of Mirando and along the Webb-Duval County line, increases the gas from that field, most of which has been contracted to the Mission Oil Co., to be sold in San Antonio, up to around 250,000,000 feet per day, and it is claimed twice that will be abailable for the line by the time it is completed. It will run from, this field to McMullen County where it will connect with the Southern Natural Gas Co.'s line to San Antonio.

Milam County

It is expected Magnolia Petroleum Co. will drill in No. 1 Kime in the southern part of Milam County some time this week. The well has casing set at 3,805 feet, at which point it is understood to be in the Edwards line and with a showing of oil that warranted a test. Interest aroused by this test has resulted in the usual amount of play in royalties and leases about the test. The significance of the test in the minds of some oil men is that they believe the well will prove that production can be found in the Edwards on the regional dip and that it is not necessary always to be on a "high". According to the log of the well it is generally believed the well hit the Edwards log. However, further developments may prove all theories wrong.

J. W. Allen-Eagle Co.'s No. 1 Joe Brown, a wildcat six miles west of Rockdale and northwest of the Magnolia test about four miles, is drilling below 1,500 feet. John E. Lee's No. 1 Isaacs, a wildcat four miles north of Rockdale, is shut down at 2,800 feet waiting for a heavier rig.

In the Rockdale shallow producing field, the Chicago Land & Oil Co. last week paid $100 an acre for a lease on the 26 acre dairy farm of W. E. Gaither. It is located between the leases of the Milam Production Co. and the Bowman Oil Co. E. Noack has spudded in on No. 1 Kirchenwitz, a half mile west of the nearest production. Clear Lake Oil Co. is drilling in No. 5 Coulter. Bartlett Oil Co. is drilling in its No. 5 Coulter. John A. Lee is drilling in his No. 2 Phillips. Baggett Bros. are drilling at 600 feet in the No. 1 Kevil. Roy Long is drilling at 1,800 feet in his No. 3 Schroeder, having passed the shallow sand and will drill to the Austin chalk.

Caldwell County

United North & South Oil Co. has completed No. 1 McKinney at a depth of 2,100 feet good for 200 barrels a day from the Edwards Lime. The test is 500 feet north and west of the nearest production on the Stair lease in the Luling field on the Caldwell county side of the river. The test was started as a deep test to try out sands below the Edwards. Casing was set in the well at 2,080 feet. Detert & Olmstead have completed No. 2 River Bed in the bed of the San Marcos river between the two sections of thhe Luling field. It is a 3,000,000 cubic foot gasser at 1,640 feet and will be used to supply fuel for operating the company's leases. The well caught fire and burned down the derrick just as work was in progress to complete it a month ago necessitating considerable delay in bringing it under control.

Bastrop County

Plateau Oil Co. is drilling at 3,150 feet in No. 1 Calvin Coal Co. test in the Austin chalk which they topped at 3,100 feet. Thus far the test has not been very encouraging but there is considerable chance yet when it is considered that the Magnolia's No. 1 Kime in Southern Milam hit all the formations low and had no showings to mention till the one in the Edwards, where it is now testing. Nelson & Dorning north of Plateau on Consumers Coal Co. property are still shut down for lack of water. Simms Oil Co. in No. 1 B. K. Smith bailed at 2,265 feet and got a little oil. It is in the Austin chalk and is about the same showing that the old Dixie test got a quarter of a mile away. With the exception of the Patton test on the Glover tract everything else in Bastrop is shut down for lack of water.

Williamson County

Plateau Oil Co. is drilling at about 1,500 feet in the Austin chalk in No. 1 Pflugger in Williamson a little east of Coupland. Gulf Production Co.'s No. 1 Ryals is shut down at 1,400 feet a little south of the old Thrall field.

Wilson County

R. M. Bleakie was prepared to spud in No. 1 Denning a little north of Stockdale in Wilson county.

Zavala County

Hadley & Harman have completed the standardizing of No. 1 Pryor of the Continental Oil Co. in Zavala county and have started drilling at 2,000 feet at which point 10-inch casing is set. They are this week spudding in No. 1 Pecan Pasture test for the Old Dominion Co.

Atascosa County

Halloran & Gilliam's No. 1 Peeler in the southern part of Atascosa County line, is drilling below 1,500 feet; Atascosa Oil & Gas Co.'s No. 1 McAda, at 2,500 feet is rat-holing ahead cautiously, hoping to pick up a gas sand. Location is close to the pipe line of the Southern Natural Gas Co.

Bexar County

Humble Oil & Refining Co., after setting casing, drilled in No. 2 Cassin, 5 miles south of San Antonio and a little west of Mitchell Lake. The well at 1,540 feet is in the top of the Edwards lime, and bailing last Thursday morning developed that the casing was improperly set and water was coming in from above and casing must be reset before the test can be made. This is the second of the Humble's tests on its big 40,060-acre block in Bexar County, the other, the Minna Coreth, developed a small gas well with a little very heavy oil at 1,170 feet in the Taylor marl and had not reached the Edwards. Humble, it is understood, has only started on the wildcatting of the block and will drill many tests before abandoning the leases, and some of the tests will be made very deep.

Due largely to the publicity given the district from the fact that the Humble has such an extensive block almost touching the city limits and is drilling on it, some royalties under the leases have sold at stiff prices. Farish, Watts, Collins & Crosby paid $26,000 cash for the one-thirty-second royalty on 2,100 acres which in cludes the Minna Coreth tract on which Humble is now drilling and other scattered blocks around that test. This is on a basis of $50 for a one-eighth royalty and some others have sold for the same price. That is about the highest that has been paid.

W. A. Maupin, W. M. Zener, L. B. Embry and F. A. Perrenot are nearly rigged up and ready to spud in on No. 1 Catarina de Rivas, about 2½ miles south of the Humble's No. 2 Minna Coreth which has been spudded in 300 feet east of No. 1 and is now drilling at about 500 feet. Andrews and Kerr are moving in a rig on the L. Janzen 271-acre tract about 4 miles south of the Humble's Minna Coreth test.

Humble has lately paid $175,000 for 500 acres in fee, the land lying between the two major portion of its block of leases in southern Bexar.

In Somerset Field, Witherspoon Oil Co. is drilling in No. 1 Klemecke, and the Helvetia Oil Co.'s No. 6 Langley is drilling, No. 13 in the Sarah Smith homestead and has set and cemented 6⅝-inch at 1,250 feet in No. 15 on the same lease and has spudded in No. 11 Weimer.

Brewster County

Green Valley Oil Co., in the western part of Brewster County, has been unable to complete No. 1 Doddridge and is undertaking to go back into the old No. 1 Wilson, drilled nearly five years ago, and attempt again to make a well of it. The well came in and made about 800 bbls. of oil in storage and was then lost. It is believed the last location made by the company was in the wrong direction and crossed the fault.

Lack of water is still a great handicap all through the Guadalupe, Caldwell, Bastrop district. Sun Oil Co.'s No. 1 Stacey in western Caldwell County is setting 8¼-inch casing at 1,370 feet to shut off water and carry the hole on down. Payne & Bond, at Maxwell in the No. 1 C. T. Schawe are drilling in 1,132 feet; C. D. Wilford, who has three tests in Caldwell, is shut down for lack of water in all three, No. 1 Schroeder having reached below 1,000 feet, and No. 1 Holmes and No. 1 Linam having each made but little depth. Witherspoon Oil Co. is drilling at 1,900 feet in No. 1 Kelly, a wildcat south of the town of Lockhart, and is drilling in Nos. 5 and 6 on the Cardwell, these being the first wells drilled since Witherspoon took over the lease from Mills Bennett.

The extent to which wildcatters are forced to go for water is illustrated by the E. L. Smith Oil Co. laying 7 miles of water line from the Flannigan pumping plant, east of Lockhart, to the C. L. Lackey, near Dale. Due to difficulty in getting the water through that much line the test has not yet been spudded in.

Mirando District

In Duval County, the Associated Oil Co.'s No. 1 Southerland is drilling in limey gumbo at 550 feet; O. W. Killam's No. 5 Benavides has set and cemented 6⅝-inch casing at 1,744 feet in the Cole gas field. Humble Oil & Refining Co.'s No. 4 Walsh over in the center of the county at Noleda is drilling at 580 feet in gumbo. Since the announcement that the Humble's No. 1 Pusch, in the extreme northern part of Duval County on Survey 116, was a fresh water well at 2,400 feet after plugging back from 2,636 feet, the company, through agents, has paid $30 an acre for a section of land in fee near the well and allowed the owner to retain a one-sixteenth royalty. Land in fee for ranch purposes in that territory is said to be worth not to exceed $8.50 an acre. Humble is leaving the No. 1 Pusch capped and is moving farther to the southeast for a test on the north part of the Ridder tract. Mar-Tex drilled a number of wells and developed some gas on the south part of the Ridder ranch several years ago.

Major companies are showing a tendency to buy in fee in Duval and other sparcely settled counties where land is cheap. Vacuum Oil Co. recently bought 12,000 acres in fee in Duval County. Vacuum only within the last year became interested in this territory because the fields are generally producing lubricating oil.

In Zapata County, C. N. Haskell, exgovernor of Oklahoma, and formerly connected with the Middle States Oil Co., has lately paid a visit to the property of the Magic Oil Co., of which he is president, the property being situated in the old Charco Redondo shallow field in southern Zapata. The company is planning to lay a pipe line. Chandler & Gear's No. 1 Martinez is drilling in hard lime at 2,170 feet; The Texas Co.'s No. 1 Jennings is drilling in sandy shale at 2,520 feet.

In Webb County, the Associated Oil Co.'s No. 1 Westphal is shut down at 1,623 feet, and No. 1 Lopez is standing at 1,707 feet. Allen-Chenault's No. 4 gates, in the Leaseholders' Pool, has been abandoned at 1,056 feet in salt water; Baltic Co., at 2,580 feet, is in hard limey shale in No. 1 Pratt, near Encinal; Daniels' No. 1 Reiser is shut donw at 347 feet; Morgan and others' No. 1 de la Garza is drilling at 2,000 feet in sandy shale; Snodgrass and others are fishing for liner at 2,438 feet in the No. 1 de la Garza.

In the proven pools of the Mirando Field, Ball and others are drilling in the No. 2 Puig on Block 73. Crown Central's No. 22 Garcia is a 25-bbl. pumper at 1,790 feet; No. 23 has set and cemented 6⅝-inch at 1,756 feet, and No. 1 Bruni is drilling at 1,600 feet in sticky shale; Magnolia's No. 16 Ochoa is standing at 1,740 feet.

In Jim Hogg County, Pippin-O'Byrne's No. 2 Palacious, which found a saturated sand at 1,305 feet, 7 miles south of the Henne, Winch & Fariss extension

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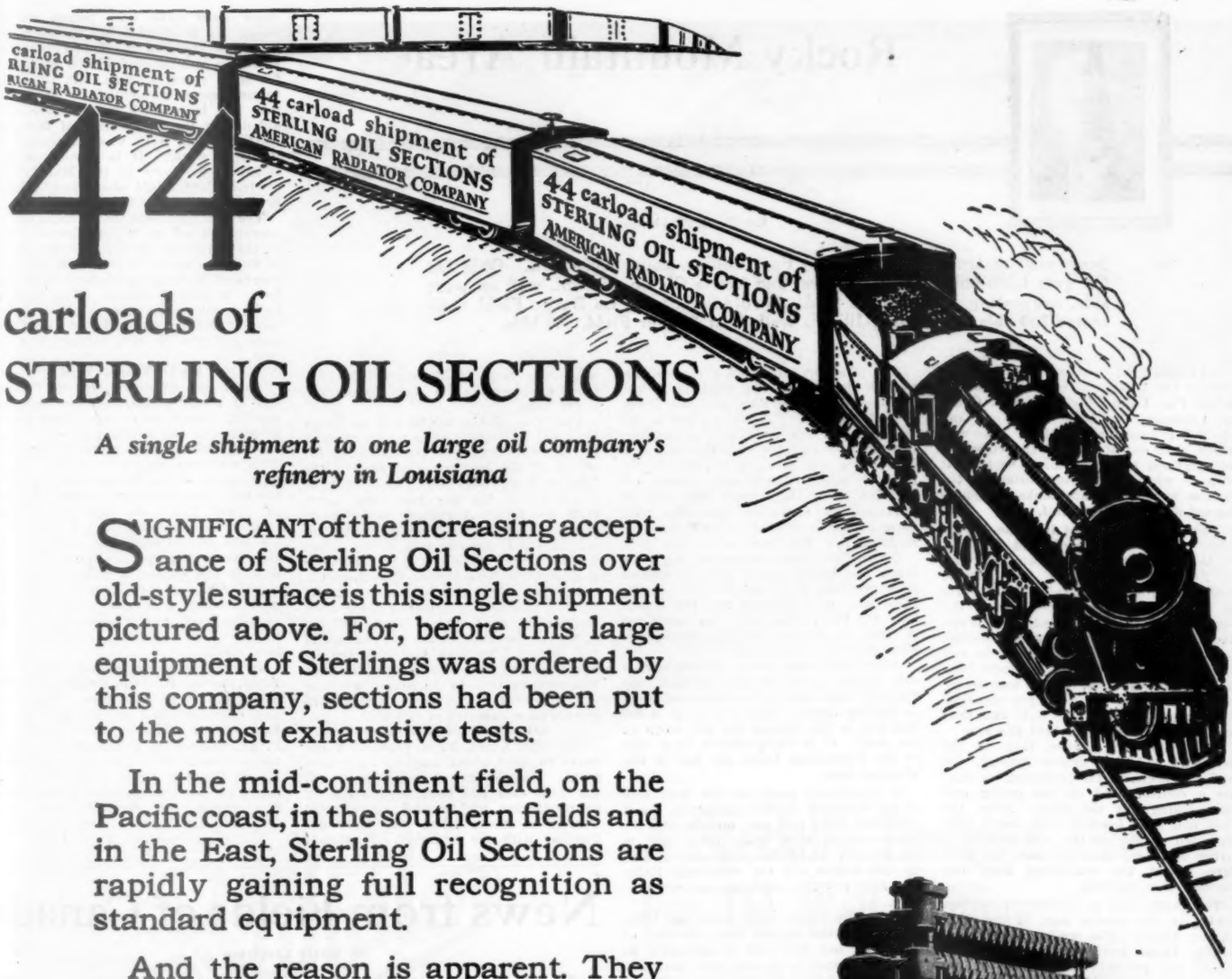
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Rocky Mountain Area

By F. B. Taylor

Scott well of Union of California, Fort Collins, doing 4,000 bbls. Ohio Oil Co. gets 1,200-bbl. well in Sunburst and Lewis Oil Co. 250-bbl. well on west side, suggesting extension of field. Wyotan Co. well, La Barge Field, estimated 200 bbls. Wyoming-Illinois well, Lost Soldier Field, 300 bbls.

CASPER, Wyo., Aug. 2.—The Scott well of the Union Oil Co. of California, in the Fort Collins Field, Larimer County, Colorado, has been bailed out and the well is good for 4,000 bbls. The well never went out of control and elaborate preparations had been made to keep it in hand when the pressure came on, the flow is now going into tankage, though beaned down to about half.

This well was drilled into the Muddy sand with a rotary drill and core bit. At the same time the hole was kept full of fluid and this fluid was further weighted with barium sulphate in order to give an additional pressure on the sand. The weight of this column of fluid, about 4,800 feet high, was sufficient to hold back the heavy gas pressure and the only indication of a producer was the core brought up, which was saturated with crude. A little gas managed to bubble up through the fluid and thus indicated that the sand held gas also.

When the core showed that all the pay sand had been drilled through, the well was prepared for producing by placing a control head on the casing and then taking out the fluid. After the fluid had been lowered to a depth that indicated danger of the well flowing, a string of tubing was run and the pressure flowed the remaining fluid out through this opening.

The Scott well is located on Section 6-9-68, in the central part of the Wellington Dome. The wells on the Wellington Dome have shown considerably higher gas pressure than those of the Fort Collins Dome, but the oil has also come in with the gas. The first wells on the Wellington Dome started off as big gas wells that later went to oil. When first drilled in the early wells were out of control and some bad fires resulted that caused heavy expense to the operators before being put out. The Union's handling of the Scott well kept the new strike from blowing wild and causing any loss of production. The use of barium sulphate to add weight to the column of fluid in a well is a new procedure in the Rocky Mountain region, but the success of this trial is likely to bring it into regular use in the fields where heavy pressures are encountered.

The Blunck well of the Union Oil Co. of California is the next well expected in and the hole is now thought to be about 30 feet off the sand. The well is kept full of fluid and considerable oil is coming into the hole from the shale and the hole is at 4,540 feet. The Fort Collins Field is sending out about six cars of crude daily, from the wells of the Union Oil Co. of California and this oil goes to Florence, Colo., and Salt Lake City.

A sale was closed in Shelby, Mont., the past week for several tracts aggregating some 900 acres in the Sunburst Field. The tracts are all well out on the edge, lying on the southeast and the east side of the development and the purchase was made by English people at a price of $200,000.

The seller is the Pilling Royalty Co. and Captain A. R. Collins of London, England, represented the English syndicate. The 900 acres are in tracts in Sections 13, 23 and 24 in Township 35, Range 2 and one lease on the east side of the field in Section 15-35-1.

The Ohio Oil Co. found a big well on Section 30-35-1 in the Sunburst Field the past week. The Ellis sand was found at 1,476 feet and the hole started to fill up at once. The crew was unprepared for the flow and the well shot oil high in the air for a time, it was finally brought under control and started off at 1,200 bbls. Only about 500 bbls. of tankage was available when the well came in and it is shut in while tankage is going into the location.

On the adjoining section on the same lease, the Bitter Creek Oil Co. drilled in a producer good for 20 bbls. in the Ellis sand at 1,565 feet and the Queen City Oil Co. drilled in a well good for 35 bbls. on Section 31-35-2, finding the Ellis sand at 1,475 feet.

After being shut down all last winter and fishing most of the summer, the Potlatch deep test in the Sunburst Field is drilling again. The well is at 4,460 feet and is the deepest yet put down in the field. It is being drilled as a test of the formations below the top of the Madison lime.

A completion made on the west side of the Sunburst Field is attracting much attention there and may open a new development in that field. This well is on Section 14-135-3w and was drilled by the Lewis Oil Co. of Great Falls, the firm has the southeast quarter section.

The Ellis sand was found at 1,670 feet, somewhat deeper than the rest of the field, but the well is estimated at 250 bbls. and is in an area that has been condemned as dry. In fact the same section that holds this well has a dry hole drilled on it several years ago. This strike is about 3 miles west of the field proper and west of the Great Northern Railroad tracks about a mile. The railroad was roughly considered the west line of the field, but the Lewis strike shows the productive area may reach beyond the tracks.

Seek Southeast Extension

The Sunburst Field appears to be starting an extension to the southeast. Some dry holes drilled in this direction are now being discounted as the development in the field itself shows many dusters in the productive area. The land in that direction is being leased and but little attention is being paid to the dusters. A syndicate has already started a well on the Marias River about 20 miles south of Galatea and about 25 miles beyond the Sunburst development. The location is on Section 19-30-3e, on the north bank of the Marias.

The whole country between the southeast corner of Sunburst Field and the Arrow Creek arch in Choteau County is now being looked over for possible fields, in the hope that after allowing for a break, another field like Sunburst may be found. The Goosebill structure, often surveyed by geologists, lies on this line between the Arrow Creek arch and the Sunburst Field.

Activity in Artesia

At the south end of the Rocky Mountain region, the Artesia Field in New Mexico is showing much activity. Flynn, Welch & Yates brought in three good wells good for 100, 300 and 450 bbls. respectively. Snowden & McSweeny completed a producer good for 150 bbls. and the Maljamar Oil Co. has a 600-bbl. well. Shaw & Rathke drilled in a small producer that is little better than a dry hole.

The Ohio Oil Co. has bought the Santa Fe Hotel in Artesia, close to the railroad station and will use the building for offices of the company and also of the Illinois Pipe Line Co. This will be headquarters for the pipe line wires from the field. A refinery is being located at Artesia by the Continental interests which recently took over a share in the Flynn, Welch & Yates partnership and the New Mexico Pipe Line Co. will supply the crude for the plant. At present this line is shipping crude from the field by tank cars to Texas refining points at the rate of 20 cars daily and the Illinois Pipe Line Co. is laying its line from the field to the railroad. The company expects to be shipping crude by September. The new refinery will start with a capacity of 600 bbls.

Salt Creek Settling Down

The Salt Creek Field production appears to have about reached its settled point. As the gas pressure went off, the wells that had been flowing fell off in production and caused considerable uneasiness among those who were not familiar with the situation. Now that these wells have been placed on the pump, the production has shown a tendency to stabilize itself and it is expected to stay around 50,000 bbls. daily for some years to come. At times due to unforeseen accidents, the production may fall to a much lower figure as it did during the heavy flood of last year when the field work was demoralized by the high water. It is possible that a sudden shut down of the Midwest big electric plant might also show a heavy drop in production figures.

The oil operators are hoping for a resumption of work on Teapot Dome by the Mammoth Oil Co. and the citizens of Casper also look forward to this as a means of livening up business conditions here. A pool of shallow oil is expected to be developed on the east side of Teapot in the Shannon sand around 900 feet deep and this is also attracting attention.

Burke Teapot Well

The Burke Syndicate well on the east side of Teapot Dome made 750 bbls. during July, after being shut down several days during the month and also having trouble with the tubing and power plant. This well was drilled to satisfy the requirements of the Government regarding the Syndicate holdings and the hole went to 1,800 feet. As the well passed through the Shannon sand, a showing of oil was encountered, but owing to the Government permit stipulations, the drilling was continued and the oil showing at 800 feet was ignored. After the well reached 1,800 feet, the oil came in quite freely and it was placed on the pump. The well made as high as 65 bbls. daily.

In the north end of the Salt Creek Field the old Shannon development first led operators to that area. The Shannon operation had an oil seep in the base of the Shannon sand stone, and P. M. Shannon of Bradford, Pa., drilled the first wells there that led to the opening of the Salt Creek Field itself. At one time in the prehistoric history of this region, the Shannon sand stone formed a great dome over the present

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News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., Aug. 1.—Official figures of the Royalite Oil Co. production in the Turner Valley Field for the month of June show that the Royalite shipped 491,716 imperial gallons, or 14,049 bbls. of crude naphtha from No. 4 well; or an average of 453 1-5 bbls. per day. This production was 73 degree gravity naphtha. The well has now an estimated wet gas production of 21,000,000 feet a day, which will ultimately be piped to Calgary. From Nos. 1, 2 and 3 wells, whose wet gas output was handled in the company's gasoline absorption plant the month's production totaled 530 5-7 bbls. of gasoline. Arrangements have been concluded between the Gas Production & Transportation Co., Ltd., a Canadian subsidiary of the International Utilities Corp. of New York, and the Royalite Oil Co., whereby the Royalite will undertake the construction of a $250,000 plant to "scrub" the sulphur odor from the Turner Valley gas. This plant will, it is expected, be in operation early this fall. The Gas Production & Transportation Co. has agreed to construct at once a new 10-inch pipe line from the Turner Valley Field direct to Calgary; and, on completion of this line, a large percentage of the Turner Valley gas will be used for consumption in Calgary. Imperial Refineries, Ltd., a subsidiary of Imperial Oil, Ltd., will utilize this new gas line for the transportation of gas from the Turner Valley Field to its refinery at Calgary. Imperial Oil, Ltd. is constructing a 4-inch oil line from the field to the Calgary refinery to handle its crude naphtha production.

In the Turner Valley Field, Royalite Oil Co. No. 6 is reported drilling around 1,100 feet. Royalite No. 5, about 200 yards north of No. 4 gusher, is drilling at 1,087 feet, having been delayed by fishing for a lost rotary bit. McLeod Oil Co.'s No. 2, Section 1-20-3w5, is reported drilling below 1,000 feet. Illinois-Alberta Oil & Refining Co., Section 12-20-3w5, is arranging to finance the deepening of its gasser to the big sand in the Madison lime. Vulcan Oils, Ltd., spudded in recently, and is making good headway.

In the Coalspur district, west of Edmonton, Imperial Oil, Ltd., Coalspur No. 2, at 3,355 feet is underreaming to carry the 12½-inch casing on down. In the Willow Creek Field, west of Nanton, the Rice Creek test is still fishing for lost tools at 2,000 feet.

Sweetgrass Field

In the Sweetgrass Field, near the Montana boundary, Imperial Oil, Ltd., Dead Horse Coulee No. 2 has finished cementing off casing at 2,000 feet and drilling through it has deepened the hole to 2,173 feet. This location is 6 miles north of the Alberta-Montana boundary, 1 mile north of the Rogers-Imperial gasser, and 30 miles east of Coutts. Canadian Oil & Refining Co. (Rogers-Imperial) Section 29-1-11w4 has finished mudding off the gas and is drilling slowly in the black caprock formation supposed to overlie the Ellis sand. The test is making about 6 feet a day, and should come in within a week. The new Imperial Oil, Ltd. test at Erickson Coules, some miles southwest of Rogers-Imperial, has been definitely located on the northwest quarter of Section 8-1-12w4. The camp is being built and a steel derrick and heavy rotary outfit will be used for the test, machinery having been already shipped.

In the Foremost Field, southern Alberto, considerable excitement has been

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California Field Operations

By L. P. Stockman

Inglewood may increase 15,000 to 20,000 bbls. and may reach 150,000 bbls. Pacific Oil Co.'s No. 11 Baldwin drilled into production in 17 days. Northwest section of field discouraging. Standard completes five wells during the week. Barnsdall's No. 5 O'Dea, Rosecrans, holds up well.

LOS ANGELES, Cal., Aug. 1.—Inglewood is slowly but surely reaching the high point so far as crude oil output is concerned and the production curve should start on the downward trend within a short time if there is no increase in the present rate of development. The field is expected, however, to register a further increase, perhaps 15,000 or 20,000 bbls., before the turning point is reached. The fact that the increase during the past few weeks has only been slight, compared to that shown for several weeks previous, is one indication that the high point is not far distant. As was stated several weeks ago, the production curve will be rounded and start off with a gradual decline, rather than any sudden drop, as producers are holding up remarkably well. The upward trend is now rounding off and it is believed that a corresponding drop from the peak will begin shortly.

It is rather difficult to cite any specific time as the beginning of this anticipated drop in production for several reasons, the principal of which is the rapidity of drilling and the future policy of the Standard with respect to drilling. This company will either force the field to a new high, which might even approach 150,000 bbls. a day, or allow it to decline by holding down its drilling program to a minimum. The company has about 20 choice inside locations on its Vickers and Los Angeles Investment leases and it is these wells which will boost the field output or retard the decline, depending upon when and how fast they are drilled. If any considerable number get under way at once the peak is not in sight, but if they are drilled slowly a gentle field decline may be anticipated.

No. 11 Baldwin of the Pacific Oil Co. might be cited as a concrete example of the speed made in drilling. This well was spudded in and drilled into production in exactly 17 days. During this period the crew made 2,310 feet of hole and landed the necessary casing consisting of 1,675 feet of 11-inch and 2,310 feet of 8¼-inch, 595 feet of which was 120-mesh screen. The well was also tubed before being turned loose, 1,720 feet of 3-inch being used. This completion is one of the several listed this week and the initial output, 730 bbls. of 18.9 gravity oil, which is flowing through a ¾-inch bean under a pressure of 440 pounds, was one of the reasons why the field registered an increase rather than a decrease. This hole was not scheduled to be finished until next week, and coming in at this time, it upset well calculated predictions on completions.

Five New Wells

The Standard finished a rather successful seven-day period, during which five new wells were added to its producing list. Three of the company's producers were on Los Angeles Investment Lease No. 1 and two on Vickers Lease No. 1. On the former property, Nos. 21 and 23 were good for 2,160 bbls. and 780 bbls. respectively, the oil in each case testing 22.4 degrees. No. 21 was drilled to 2,672 feet and finished with an 8⅝-inch oil string including 1,330 feet of 90-mesh screen, while No. 23 was carried down to 2,609 feet and finished with an 8¼-inch oil string carrying 968 feet of 80-mesh screen. No. 13 on Vickers Lease No. 1 came in doing 1,496 bbls. of 20.3 gravity oil from 2,621 feet, after being finished with an 8⅝-inch oil string carrying 1,280 feet of 90-mesh screen. It is flowing through a 1-inch bean under a pressure of 430 pounds. No. 15 on this lease tanked 1,880 bbls. of 19.1 gravity oil during its preliminary test. This hole was completed at 2,642 feet and finished with an 8¼-inch oil string landed on bottom. The Standard has just finished well No. 22 on Los Angeles Investment Lease No. 1 and while the usual 24-hour production test has not yet been completed, a good idea of its potentiality can be gained from the results of the first 16 hours. During this period it made 2,256 bbls. of 23.2 gravity oil. At this rate it would be good for 3,384 bbls. a day. The completion depth was 2,679 feet. Judging by the present status of drillers on Los Angeles Investment Lease No. 1, the Standard should finish one new hole next week and two more during the following seven days. No immediate potential producers are found on Vickers Lease No. 1, although Nos. 6 and 7 on Vickers Lease No. 2 give evidence of resulting in production within the next two weeks.

Developments in the northwestern part of the field did not show any improvement, in fact several wells of the Brownmoor Oil Co. and Brown-Shasta Oil Co. look rather discouraging. The former has just made a pumping test of its No. 6 at 2,050 feet, after plugging back from 2,175 feet, but instead of getting satisfactory production as anticipated, the well's maximum output did not exceed 200 bbls. of dirty oil at any time. In addition to this small crude production, it is making 100 bbls. of water, indicating either a successful shut off has not been effected or the well has developed an edgewater condition. It is generally believed the difficulty is due to bottom water, as the company's No. 1 is held up in identically the same manner. No. 1 was given a short test at 2,150 feet after being plugged back from 2,612 feet, but it is still wet. The General Petroleum has suspended work on another hole on the Brown-Shasta property on the assumption that it is an edge well. The company now has suspension orders on No. 1 at 2,057 feet, and No. 5 at 2,048 feet, core samples indicating a formation dip of between 25 and 35 degrees in each case. Work is, however, going ahead on Nos. 2, 3 and 4, somewhat more favorably located, and the company has an excellent chance of finishing all three.

Productive Limits

For a time it looked as though the Brown-Shasta and Brownmoor's holdings would be one of the most productive in the field, but recent developments indicate that they are rather close to the productive limits of the field. The Associated Oil Co. contributed one new well during the week and three more nearing completion depths. Its new well was No. 24 Vickers drilled to 2,595 feet and finished with an 8¼-inch oil string including 1,035 feet of 120-mesh screen. The initial output was fixed at 882 bbls. of 18.1 gravity oil which cut 4.4 per cent. Oscar Howard finished a nice flowing well in the Culver City area of the field, when a test was made of his No. 1 Venezuela, drilled to 2,714 feet and finished with a 6¼-inch liner that included 411 feet of 90-mesh screen. The well, flowing through a ¾-inch bean under a pressure of 500 pounds, started off making 690 bbls. the oil testing 15.8 degrees and showing a cut of 3 per cent. Mr. Howard made a nice record at Santa Fe Springs and the boys are pulling for him to duplicate at Inglewood. His holdings in this area, however, are not as favorably located as might be desired.

The Petroleum Securities carried off completion honors when No. 8 Rubel got under way from 2,540 feet after being finished with an 8¼-inch oil string carrying 1,300 feet of shop drilled and 1,500 feet of 3-inch tubing. The first actual gauge showed it to be an excellent well and placed it in the gusher class along with those big producers finished at Santa Fe Springs and Long Beach a few years ago. It was in reality better than most of the wells finished in those districts, considering the cost and time element involved. During the first 24 hours, No. 8 Rubel tanked 3,948 bbls. of 25.6 gravity oil which cut a little better than 3 per cent. It is flowing through two 1-inch beans, the pressure being quite constant at 425 pounds. The company finished the week with a 2,125 bbl. well, when No. 13 Rubel was turned loose from 2,500 feet after being finished with an 8¼-inch oil string which carried 1,293 feet of shop perforated, and 1,500 feet of 3-inch tubing. The output from this well, which is flowing through a 1-inch bean under a pressure of 370 pounds, tests 20.7 degrees and shows a cut of 3 per cent. The company has several other prospective producers on the Rubel lease and two on the Cone property, Nos. 8 and 11, which look good for early production.

The Shell put No. 9 Rindge on a production test early this morning and estimates the initial daily output at 3,500 bbls. The production during the first 10 hours was a little less than 1,500 bbls., the oil running around 20.9 degrees. No casing record is available just now but the completion depth was 3,215 feet. The company also completed No. 10 Rindge but the well does not seem to have any kick at 2,150 feet. The hole, which was finished with an 8¼-inch oil string including 418 feet of 80-mesh screen, is at present being swabbed and may get under way shortly.

Rosecrans

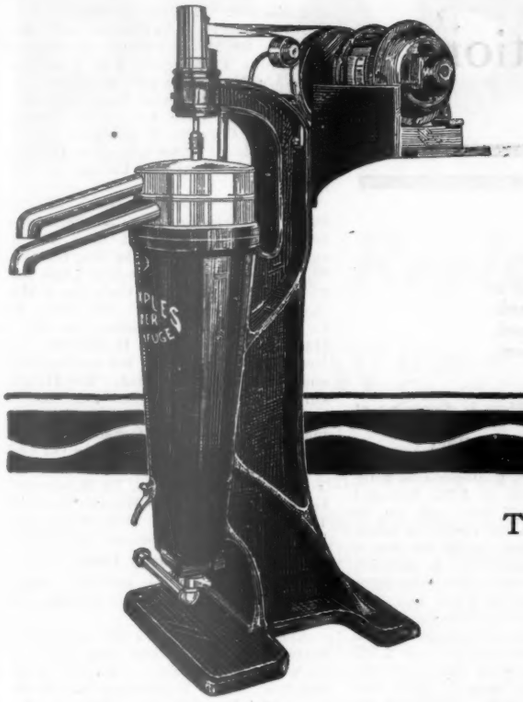
The Barnsdall Oil Co.'s No. 5 O'Dea, completed last week in the Rosecrans Field, is holding up remarkably well, in fact it has shown a slight increase and gives evidence of proving the exception to the rule that completions in this field fall off very substantially during the first week or 10 days. The Associated's No. 1 Wanka, on the other hand, has fallen off miserably following its recompletion, declining from 1,408 bbls. a day to around 260 bbls. No. 1 Kreitz of the California Petroleum, finished several weeks ago, is, however, holding up remarkably well and is averaging better than 1,000 bbls. a day. This is proving quite a stimulant to operators drilling nearby and work in this area is being pushed ahead with all possible speed. The Fullerton Oil Co.'s offset, which was scheduled to set a new drilling record in the field, ran into a little fishing job at 3,727 feet where a twist-off left several stands of drill pipe in the hole. George F. Getty got a nice showing of oil and gas in his No. 6 at 4,735 feet and is preparing to set a string of 6¼-inch. The Marine Oil Corp. made a test of its No. 37 Athens but the output proved rather unsatisfactory and drilling will be resumed at 4,427 feet. The production test showed a maximum output of 200 bbls. a day of 31.4 gravity oil which was accompanied by 2,000,000 feet of gas. The Mohawk Oil Co. completed No. 1 Bateman at 5,248 feet and finished the hole with a 4½-inch liner carrying 148 feet of 100-mesh screen. The well was turned loose during the latter part of the week and came in flowing 492 bbls. of rather clean 32.9 gravity oil. No. 1 Dixon of the same company is held up at 4,640 feet because of mechanical trouble. No. 2 Padelford of the Union was given a short test during the early part of the week and proved

(Continued on Page 102)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Dungannon, July 20, Boston, crude	75,029
Empire Arrow, July 20, New York, refined	95,987
Joseph Seep, July 20, New York, refined	74,711
Wm. Rockefeller, July 21, New York, crude	137,884
H. C. Folger, July 22, Philadelphia, refined	75,393
Emidio, July 22, Baltimore, refined	75,318
Swifteagle, July 24, Fall River, crude	76,949
Byron D. Benson, July 26, New York, crude	83,156
Standard Arrow, July 26, New York, refined	92,183
Coastwise	
Lubrico, July 20, Portland, fuel	86,088
W. S. Miller, July 20, Seattle, fuel	74,671
Coalinga, July 21, Oleum, crude	75,697
K. R. Kingsbury, July 21, Richmond, crude	83,871
Tejon, July 22, Portland, fuel	73,670
Kewanee, July 23, Seattle, refined	30,016
Solana, July 23, Avon, crude	70,471
Capt. A. F. Lucas, July 24, Ketchikan, refined	30,211
H. M. Storey July 24, Richmond, crude	92,899
Mericos H. Whittier, July 24, Oleum, crude	77,547
K. R. Kingsbury, July 25, Richmond, crude	84,018
Los Alamos, July 26, Portland, refined	31,385
Utacarbon, July 26, Martinez, crude	75,063
Exports	
China Arrow, July 20, China, refined	92,901
Tascalusa (Br.), July 20, Manila, fuel	55,606
Mina Brea (Br.), July 21, Vancouver, crude	40,086
Warwick, July 21, Vancouver, refined	39,632
La Placentia, July 23, Balboa, fuel	80,050
Betterton, July 23, Pearl Harbor, fuel	71,427
Liebre, July 23, Japan, fuel	62,723
San Leon (Br.), July 24, Chile, fuel	60,011
Sato (Jap.), July 25, Japan, fuel	58,277
Montebello, July 25, Chile, fuel	71,892
Coalinga, July 26, Vancouver, fuel	72,268
Hayatomo (Jap.), July 26, Japan	60,702
Kiyo Maru (Jap.), July 26, Japan, fuel	65,798
From Ventura	
Frank H. Buck, July 20, Avon, crude	63,715
Frank H. Buck, July 25, Avon, crude	61,482
From Port San Luis	
Deroche, July 21, Oleum, crude	73,568
Agwipond, July 23, Wellington, fuel	88,452
Deroche, July 25, Oleum, crude	74,095
From San Francisco	
Kewanee, July 20, Los Angeles, refined	29,851
Sun, July 22, Tampa, refined	74,972
San Nazario (Br.), July 23, Buenos Aires, fuel	106,905
Paul Shoup, July 24, Seattle, fuel	78,739
H. T. Harper, July 25, Sydney, refined	33,194



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—Minimizing investment in new absorption oil
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Gulf Coast Oil Operations

By P. L. McGreal

Rycade Petroleum Corp.'s No. 2 Meier, Fort Bend County, showing oil. If a producer, will be first around any of the new domes tested by seismograph and torsional balance. Gulf Refining Co.'s No. 39 Star, in Vinton Pool, 1,200 bbls., best of week. South Liberty had only 825 bbls. new production.

HOUSTON, Tex., Aug. 3. — The Rycade Petroleum Corp.'s No. 2 Meier, in Fort Bend County, is showing oil in a sand and casing is being set at 1,330 feet and the hole will be bailed. The location is about 7 miles southeast of Damon Mound. It is a new saline dome tested out first by the seismograph and torsional balance methods, followed by the drilling of several shallow tests and one very deep test on the Nash, Flessner and Meier tracts. The Rycade Corp. has been exploring the vicinity of the dome for over one year. If a producing well is developed it will be the first around any of the new domes, presumably located by the seismograph or torsional balance systems. Hence the interest with which the result of a test is awaited by operators.

The estimated daily average gross production for the week in the Coastal pools is placed at 108,705 bbls., compared with 109,787 bbls. last week, or a decrease of 1,082 bbls. The South Texas districts are credited with 97,470 bbls. of the gross and the South Louisiana pools with 11,235 bbls.

The estimate for each district is as follows:

District—	Gross Bbls.
Batson	1,410
Blue Ridge	980
Barber Hill	105
Big Creek	1,010
Dayton	45
Damon Mound	1,170
Edgerly (La.)	480
Goose Creek	9,750
Humble	4,295
Hull	18,750
High Island	575
Jennings (La.)	820
Markham	75
Lockport (La.)	50
Orange	19,375
Pierce Junction	425
Spindletop	1,150
Saratoga	1,660
Sour Lake	3,995
South Liberty	21,200
Vinton (La.)	9,800
Welsh-Anse La Bute (La.)	85
West Columbia	11,375
Miscellaneous	125
Total	108,705

Southwest Fields

The estimated daily average gross output for the Southwest fields is placed at 45,280 bbls. for the period ending August 1, compared with 46,650 bbls. for the previous seven-day period. The decline is mostly in the Lockhart Field.

The estimate for each field is as follows:

Luling	22,000
Laredo districts	4,650
Somerset	2,705
Calliham	310
Rockdale-Minerva	815
Jim Hogg County	3,900
Lockhart	10,900
Total	45,280
Grand total for week	153,985
Grand total last week	156,437
Decrease	2,452

Other wildcats showing and to be bailed in addition to the Rycade Corp.'s No. 2 Meier are: C. T. Rucker's No. 1 Fisher, on the shore of Trinity Bay, east of Cedar Bayou and the Goose Creek Pool. Casing is being set at 2,220 feet and 6-inch screen will be set in 21 feet of sand showing oil and gas. The Moody-Seagraves No. 1 Raisin, 7 miles west of Victoria, is reported showing gas. In Center County, Collette and O'Rourke's No. 1 Crawford, near Paxton, are setting casing at 2,560 feet to bail a sand showing some oil. In the same county Daniels and others' No. 2 Ashberry is drilling around 600 feet and the Crusader Oil Co.'s No. 1 Shoat is starting in the western part of the county. The Texas Co. abandoned No. 2 Taylor at Boling Dome in Wharton County.

It has been another lean week in the Coastal area, with but few wells completed. The best well was the Gulf Refining Co.'s No. 39 Star, in the Vinton Pool, good for 1,200 bbls. in the deep sand there. Only 825 bbls. of new production came from the South Liberty Pool, where operations are confined to the major companies on the south-southwest side of the dome. Eleven rigs are running there, compared with more than 80 three months ago.

The following table is a summary of the results of the week's operations:

District—	Comp.	Prod.	Dry	SW	Blg.
Batson	1	0	0	1	0
Goose Creek	2	150	0	1	0
Humble	2	100	0	1	0
Hull	5	415	0	1	3
High Island	1	0	1	0	1
Jennings	1	0	0	1	0
Orange	1	0	1	0	0
Spindletop	1	15	0	0	0
Sour Lake	3	130	1	0	0
South Liberty	3	825	0	0	0
Vinton	4	1,290	0	1	0
West Columbia	1	25	0	0	1
Miscellaneous	2	0	2	0	0
Total for week	27	2,950	5	6	5
Total last week	26	3,744	8	0	6

Gulf Coast crude is going into steel and earthen storage. Stocks increased over 500,000 bbls. during June and it is expected the July figures when compiled will show about the same increase. There is less demand for Coastal crude for the manufacture of lubricating stocks in the summer months than during the cold weather months when the market broadens in the north and the eastern markets. Another factor is the use of the cheaper Webb and Jim Hogg Counties crude by several refiners in Houston and San Antonio. In one word, the production of heavy gravity crudes is in excess of the requirements of the refineries at the present time. Under these circumstances it does not look favorable for any immediate advance in Coastal quotations on crude.

Operations in Pools

In the Orange Pool, the Kishi Development Co.'s No. 6 McGuire bailed and got nothing at 3,390 feet. The hole is being drilled deeper.

In the deep sand section, the Gulf Production Co.'s No. 10 Paveto is drilling around 4,615 feet and No. 3 Hamman-Consolidated is about 4,587 feet. No. 8-A Winifree is around 3,665 feet. The Rycade Corp.'s No. 2-B Cow Bayou is working over and No. 1-C is drilling around 500 feet. The Continental Oil Co.'s No. 6 Chesson is working over. No. 16 is rigging to start drilling. The Humble Oil & Refining Co.'s No. 12 Chesson is drilling deeper and No. 22-B is around 3,125 feet. No. 19-A is below 4,033 feet.

The Atlantic Oil Producing Co. is working over No. 4 Hager. The Orange Petroleum Co.'s No. 5 Winifree is idle and No. 6 Chesson is around 1,400 feet. The Edgerly Petroleum Co.'s No. 11 Carbello is around 2,615 feet. No. 1-B Carbello is below 3,060 feet. The Sinclair Oil & Gas Co.'s No. 1 Turner is drilling around 1,255 feet. The Sun Oil Co.'s No. 1 Johnson is a 3,985 feet and No. 4 Gunstream about 3,743 feett. The Peer Oil Co.'s No. 5 Galliere is deepening at 3,445 feet.

Liberty County Pools

In the South Liberty Pool, the Gulf Production Co.'s No. 9 Deussen is drilling on the south side at 1,765 feet and No. 10 is below 2,465 feet, with No. 11 rigging. No. 2 Van de Vanter is below 4,054 feet. A derrick is up for No. 3 Antonie. The Humble Oil & Refining Co.'s No. 2-A Deussen is shut down after drilling into rock salt at 3,720 feet. The Associated Oil Co.'s No. 1 Deussen fee is below 4,100 feet. No. 4 Deussen is drilling around 2,543 feet and No. 5 at 2,825 feet. The Sinclair Oil & Gas Co.'s No. 4 Condit is drilling around 1,655 feet and No. 5 is starting up. The Peer Oil Co.'s No. 1 Condict is around 3,235 feet.

On the north side, The Texas Co.'s No. 6 Simms fee is drilling around 3,345 feet and No. 7 is below 3,235 feet. The Humble Oil & Refining Co.'s No. 1-A Pickett is below 3,335 feet.

The Gulf Production Co.'s No. 6-A Deussen is flowing 500 bbls. by heads at 3,350 feet. The Texas Co.'s No. 3 Staiti is pumping 175 bbls. at 3,565 feet and No. 5 Simms fee will make a pumper.

No wells of consequence were completed in the Hull Pool during the week. The Humble Oil & Refining Co.'s No. 5 Guedry is making 125 bbls. on the jack at 2,245 feet. The Gulf Production Co.'s No. 54 Phoenix is bailing at 3,275 feet and No. 20 Morris-Phillips is pumping 25 bbls at 4,050 feet. The Yount-Lee Oil Co.'s No. 7 Stengler is bailing salt water at 4,210 feet and No. 8 will make a pumper at 3,310 feet. The Higgins Oil & Fuel Co.'s No. 7 Merchant is flowing 140 bbls. at 3,280 feet. The Houston Oil Co.'s No. 6 Abel is bailing at 1,750 feet.

The Gulf Production Co.'s No. 10 Baldwin is rigging. No. 55 Phoenix is drilling around 1,435 feet, with Nos. 12 and 35 working over. The Sun Oil Co.'s No. 7 Carr is drilling below 1,100 feet. The Higgins Oil & Fuel Co.'s No. 6 Merchant is working over. The Peer Oil Co. has a derrick standing for No. 6 Harrison. The Republic Production Co.'s Nos. 20 and 85 Dolbear are working over and No. 117 is still fishing. The Humble Oil & Refining Co.'s No. 2-A Abel is below 1,775 feet. No. 9 Guedry is working over and No. 4 Merchant is drilling around 4,000 feet. The Sterling Oil Co.'s No. 1 Seale is below 4,450 feet. The Yount-Lee Oil Co.'s No. 13 Merchant is below 4,010 feet. The Humble Co.'s No. 1 Sterling is fishing. The Texas Co.'s No. 5 Hannah fee is around 3,500 feet.

Hardin County Pools

In the Batson Pool, the East Batson Oil Co.'s No. 9 Donohoe is pumping salt water at 1,100 feet.

Anderson & Munson's No. 2 Hodges is below 3,810 feet. The Ada Belle Oil Co.'s No. 98 Paraffine is drilling around 895 feet. S. R. Buchanan's No. 83 Milhome is below 709 feet. The Paraffine Oil Co. has made a location for No. 42 Knight.

In the Saratoga Pool the Fountain Oil Co.'s No. 3 Ogden is rigging. The Skinner Oil Co.'s No. 1 Parrish is deepening at 3,290 feet as is the Rio Bravo Oil Co.'s No. 1 Fountain at 3,343 feet. The Vacuum Oil Co.'s No. 1 Teel is drilling at 985 feet and Paggi Brothers' No. 7 Lewis at 765 feet.

In the Sour Lake Pool, the Humble Oil & Refining Co.'s No. 24 Herbert is flowing 125 bbls. by heads at 3,500 feet. The McNamara Oil Co.'s No. 1 Dornek

(Continued on Page 104)

News of Mexican Fields

By George Blardone

TAMPICO, Mexico, Aug. 1.—With 13 wells completed during the past week, new production totaling 6,080 bbls. can be placed to the credit of the five tests finishing in the production column. Of these, the best well is Huasteca Petroleum's No. 40 Tierra Blanca, in the south fields, which, at a sub-sea level depth of 2,008 feet, is rated good for 5,000 bbls.

In the Panuco Field, Martin Head's No. Piedras can probably do 200 bbls. at 2,050 feet. The Texas Co.'s No. 23, Lot 15, Lomas y Llanos, is a bare 30 bbls. at 2,286 feet; and up in the Paciencia sector of the north fields, just above Cacalilao, Transcontinental Petroleum Co.'s No. 23 Paciencia is an 800-bbl. well at the very shallow depth of 1,500 feet. Over in the Marland Field, southwest of Ebano, Cia. Pet. Franco Espanola's No. 30 Limon, is good for 50 bbls. at 2,100 feet.

In the northern fields the failures follow: La Corona Petroleum Co.'s No. 5 Caposo, in the Panuco Field, is a dry hole at 2,725 feet. Mexican Sinclair Petroleum Corp.'s No. 128 West Magualbes is the same at 2,312 feet. National Oil Co.'s No. 17 Chijoles finished a duster at 2,500 feet, but there is a possibility that the drill will be sent deeper. In the Cacalilao sector, International Petroleum Co.'s No. 194, Lot 5, is a duster at 2,250 feet, and its No. 204, same lot, drilled into salt water at 2,150 feet. Transcontinental Petroleum Co.'s Nos. 197 and 198, Lot 4, finished at 2,000 and 2,060 feet, respectively, the former a dry hole and the latter in salt water.

In the south fields, Mexican Gulf Oil Co.'s No. 10, Lot 163 Chinampa, drilled into salt water at 2,164 feet.

Panuco

With the tide of operations turning steadily toward the Panuco Field, in the northern district, consider the following status of operations as the week ended: La Corona Petroleum Co.'s No. 82 San Manuel, the deep test for the old Panuco Field, is drilling in Tamasopa limestone at 3,100 feet; and its No. 19-A Delicias is in shale at 935 feet. Consolidated Oil Fields of Mexico's No. 2, Lot 6 Camolote, is in shale at 500 feet; its No. 4 is in gray lime at 1,740 feet and its No. 6 is in shale at 180 feet. East Coast Oil Co.'s No. 40 Lagunda de la Milpa is in gray shale at 1,220 feet; No. 43 Estero Grande is in shells at 1,540 feet, and its No. 10 Palangana cemented 8-inch in gray lime at the same depth as the latter. Mexican Sinclair Petroleum Corp. is moving in for No. 10 Tananturo and No. 8 Gutierrez. Cia Pet. Meridional's No. 7, Lot 85 Halcon is in gray lime at 2,320 feet. Mexican Crude Oil Co.'s No. 4, Lot 2 Isleta, has cemented 8-inch in shell at 1,525 feet. Intermex Oil Co.'s No. 1 Tampuche is drilling in gray shale at 1,285 feet. Cia. Pet. Maritima's No. 2 Federal Zone, has spudded. Mexican Gulf Oil Co.'s No. 17 Lopez is in gumbo at 200 feet. National Oil Co.'s No. 16 Chijoles has cemented 8-inch in gray lime at 1,568 feet; No. 19 is in gray shale at 1,200 feet; Panuco is in gray lime at 2,110 feet. Panuco Boston Oil Co.'s No. 2 Hernandez is rigging. Sonora Oil Co.'s No. 1, Lot 97 Halcon, is in shale at 210 feet. Transcontinental Petroleum Co.'s No. 21 Bar-

(Continued on Page 100)

READING PIPE

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Fields of the Central West

By Whit

Underwood Oil & Gas Co. gets 70-bbl. well near Bowling Green; East Ohio Gas Co. 125-bbl. producer and 75-bbl. well in Holmes County. Activity in Mayesville area, Indiana. International Oil & Gas Co. has 100-bbl. well in Lawrence County, Illinois, and Big Four Co. 50 bbls.

FINDLAY, Ohio, Aug. 3.—The section of the Central West Field lying to the north of the Ohio River reports a large number of completions during the week, the total being 48, with a flush production of 579 bbls., 15 dry holes and 3 gas wells. The week also shows that 65 old wells were pulled out and abandoned, but those were confined to the Trenton Rock areas of northwestern Ohio and eastern Indiana.

In dications are for an improvement in all sections of the field. The south end or south of the Ohio River development work, is more quiet than at any time during the current year. Wildcatting in none of the fields has brought to light much to brag of, and while there is still some test work doing, the bulk of the work is confined to a great extent to almost sure territory. Operators are making an effort to play safe, figuring that a small well is of as much value on leases where power plants are already installed as a much better well outside of the boundaries. An outside well means pipe line extensions which take quite a long time to get installed. Tinsley's Bottom, in Tennessee, is an example of this kind. There has been a nice production secured there from rather shallow depths, but it has taken several months to induce capital to install a line, but according to advice the Stoll interests are going to put in a gathering line and loading rack and care for the production. This would bring about an active drilling campaign as there is a big territory held under lease in both Clay and Jackson Counties.

The bringing in of some good wells in both the McCloskey sand of Lawrence County, Ill., and the stray sand found in Clark County, should bring about a renewal of activity in that section of Illinois. In Daviess County, in southwestern Indiana, the recent 70-bbl. well found around 1,000 feet should be an inducement for some active drilling. Indiana is less active than it should be, for good producing territory remains undrilled in both the Trenton Rock area on the central eastern portion and in the Princeton Field, along the Wabash River, to the southwest. Central Ohio is turning up some new production in Lorain, Holmes, Wayne and other counties giving the gas companies an opportunity to get two shots for one as a considerable portion of what was gas territory some years ago, is showing commercial oil production at this time.

Lima Field

Twenty wells were recorded for the week in the Lima Field of northwestern Ohio, the flush production from those producing oil amounting to 230 bbls. and four dry holes. One of the most interesting finds the past few days is the C. W. Underwood Oil & Gas Co.'s test on the northwest corner of the Emily Thomas farm, in the southwest quarter of Section 1, Liberty Township, Wood County, and only a short distance out of Bowling Green and Portage, and in what has been for years considered salt water territory. This well struck the top of the Trenton at 1,231 feet and drilled to a depth of 262 feet in the sand. The flush production was 70 bbls. and shows that the syncline is as capable of producing oil as is the anticline, for the sand was found at least 100 feet lower than on the "Hogs Back or Sucker Rod Belt" that showed many gushers in the early development of Wood County.

In the southeast quarter of Section 35, Plain Township, Wood County, and a short distance out of Bowling Green, also in the syncline, Eckler & Collins' No. 18, 735 feet from the south line and 310 feet from the west line of the E. St. John farm, produced 25 bbls. flush. Top of Trenton was found at 1,324 feet and drilled 253 feet in to a total of 1,577 feet. In the same township, Smith, Hamman and others are drilling No. 3 Harley Avery farm, Section 22, and Barclay Oerry is drilling a test on the G. A. Foos farm, Section 34. R. C. Shuler and others abandoned their old No. 2 on the W. C. Blystone farm, Section 35.

In Bloom Township, Wood County, the Ohio Oil Co.'s No. 17, 300 feet from the north line and 850 feet from the west line of the E. H. Monasmith farm, Section 28, was a duster at 1,351 feet. Same company's No. 21, on the James Moyer farm, Section 6, close to Cygnet, was a dry hole. In Montgomery Township, Onsel Brothers have abandoned Nos. 1, 2, 3, 4, 5, and 6 J. H. Wensel, Section 7, and in Portage Township, the same firm pulled out Nos. 3, 5 and 6 W. and S. Snyder farm, Section 26. In Perrysburg Township, John E. Walton and others are drilling No. 4 William Budd, Section 28, and Melvern Good is drilling No. 4 Merlin Speck, Section 32. In Middleton Township, the Waterville Gas & Oil Co. is drilling No. 9 A. Schuller, Section 16, and Lechner, Twining & Speck are drilling No. 1 on the Mrs. M. Jamerson, same section. In Troy Township, George W. Hoffman is drilling No. 5 W. and H. Hartman, Section 12. In Ross Township, just outside Toledo, the Ohio Oil Co. abandoned Nos. 1, 2 and 3 on the Thomas F. Rideout, Section 28.

In Eagle Township, Hancock County, R. Glick and others are drilling No. 10 H. Blymyer, Section 8; Porter & Hovis are drilling their No. 19 Lem Aurand, Section 5, and Star & Clark their No. 6 Alice Stauffer, Section 6. In Union Township, Ewing & Montgomery's No. 10, 800 feet from the north line and 200 feet from the east line of the Henry Deeds, Section 12, pumped 15 bbls. In Allen Township, Henry Bushey is drilling No. 3 Nathan Taylor farm, Section 25, and in Cass Township, the Ohio Oil Co. is at work on No. 15 P. C. Redfern, Section 9.

Allen County

In Bath Township, Allen County, C. A. Peavey and others' No. 14, in the southeast corner of the Elias Lewis, Section 1, pumped 5 bbls. Top of Trenton was found at 1,295 feet and drilled 25 feet in the sand. Charles Geselchen, agent, drilled in No. 3 on the southeast corner of the C. G. Dever farm, Section 12, for a 10-bbl. pumper. Top of sand at 1,328 feet and oil at 50 feet in. Carman, Botkins and others are drilling No. 4 Jesse Miller, Section 3. In Perry Township, Mrs. J. J. Graves is drilling a test on her own farm, Section 22. In Marion Township, J. Oscar Hoover and others are drilling No. 10 William Barnt, Section 2. In American Township, formerly German Township, the Ohio Oil Co. is drilling No. 9 Joseph Brenneman, Section 9.

In Richland Township, Allen County, Neuman, Small and others abandoned Nos. 1 and 2 J. N. Neuswander, Section 23; Nos. 4, 5 and 6 B. Andrews, Section 22, and Nos. 1, 2, 3, 4, 5 and 6 W. H. Stettler, Section 27.

In Jackson Township, Auglaize County, Lyons and others' test 500 feet from the south line and 900 feet from the west line of the Charles Stennerman farm, in the northwest quarter of Section 34, pumped 8 bbls. The Crystal Oil Co. is drilling a second test on the Joseph Woehrmyer, Section 23. In Moulton Township, W. B. Jack is drilling a test on the H. Stead farm, Section 33, west of Wapakinetta. In Douchouquet Township, same county, the Boston-Southwestern Oil & Gas Co. is drilling Nos. 6 and 7 Fred Presier, Section 20, and C. C. Ronshe is drilling No. 5 Fred Kohler, Section 17.

In Madison Township, Sandusky County, the Van Vleck-Stowe Oil Co.'s No. 13, 200 feet from the south line and 660 feet from the west line of the D. B. Jones, Section 30, pumped 6 bbls. Top of Trenton at 1,231 feet and oil at 91 feet in. In Washington Township, the Netcher-Magsig Oil Co.'s No. 5 R. Netcher, Section 29, pumped but 1 bbls. M. G. Norton and others are drilling No. 4 J. Whitney, Section 5. Lucy M. Heyman abandoned No. 1 E. E. Doll, Section 35, and Berlin & Russell pulled out old No. 1 Forest J. Harman, Section 25. In Woodville Township, the Ohio Oil Co.'s No. 23 Henry Bruns farm, Section 17, pumped 5 bbls. from a depth of 1,360 feet. In Jackson Township, Haubert & Talbert's No. 6 Martha A. Talbert, Section 17, pumped 5 bbls. at 1,309 feet. Same firm abandoned No. 1 on the same farm. In Scott Township, the Oden Oil Co. abandoned No. 8 Kline-Ernst farm, Section 8.

In Gibson Township, Mercer County, E. C. Smith's test in the northeast corner of the H. Braymaer farm, in the northeast quarter of Section 26, was a dry hole. In Hopewell Township, the B. Y. J. Oil Co. is drilling a test on the Elizabeth Eiche farm, Section 4. In Center Township, Colt, McClure and others' Nos. 5 and 6 William M. Miller farm, Section 4, are 15-bbl. pumpers with No. 7 drilling. In Jefferson Township, the June Oil Co.'s test 900 feet from the south line and 300 feet from the east line of the Roselle B. Albin farm, in the northwest quarter of Section 33, pumped 5 bbls. In Recovery Township, A. W. Neely and others are drilling No. 3 J. H. Stockler, Section 24. In Black Creek Township, the Celina Petroleum Co. is drilling No. 5 Brehm Brothers farm, Section 4.

Van Wert County

In York Township, Van Wert County, the Wheeler Oil Co.'s No. 3, 600 feet from the south line and 1,200 feet from the west line of the William George farm, Section 22, showed a flush of 15 bbls. In the same township, A. C. Grace is drilling No. 2 C. W. Crone farm, Section 21, and Stelzer & McClure are drilling No. 4 Kayser-Forewater farm, Section 15. In Jennings Township, Stelzer & Boyd are drilling No. 7 Roller-Kennon farm, Section 31.

In Oregon Township, Lucas County, the Ohio Oil Co. abandoned Nos. 1 and 2 C. J. Crofts farm, Section 16.

In Ottawa County, on Catawba Island, a test is being planned by the Underwood Oil & Gas Co. on the S. A. Herold farm. In Benton Township, same county, F. C. Johnson and others are working at a test on the Harry Pieffer, Section 30. In Harris Township, Elmore Field, Sherman, Richards and others are drilling No. 9 H. W. Nieman, Section 18, and the Reynolds Oil Co. abandoned No. 5 Ross Reynolds farm, Section 13. In Allen Township, the Ohio Oil Co. pulled out No. 1 J. P. Jensen and No. 1 John Frederickson, both in Section 3.

In Mississinewa Township, Darke County, E. G. Henderson and others' test 800 feet from the south line and 225 feet from the east line of the J. G. Gile, Section 9, was a dry hole. Top sand found at 1,219 feet and drilled 52 feet in. In Wayne Township, same county, Lee A. Watson si drilling No. 1 J. C. and E. English, Section 8, and No. 1 H. Cramer, Section 17.

In Cynthian Township, Shelby County, the Wittmer Property trustee, formerly reported as the American Natural Gas Co., drilled in a second test in the northwest corner of the Joe Siegel farm, Section 15, the well showing 15 bbls. Slagel & Johnson are drilling No. 3 H. F. Helscher, Section 16, and the Eilerman Oil Co. is drilling No. 2 J. W. Kloeker farm, Section 35. In Van Buren Township, E. C. Huenke is drilling a test on the W. Egbert farm, Section 18.

In Roundhead Township, Hardin County, Defenbaugh and others' wildcat, 900 feet from the south line and 800 feet from the east line of the Maggie Austin farm, pumped 5 bbls. Top of Trenton at 1,505 feet and oil pay at 37 feet in. In McDonel Township, same county, the Roundhead Oil & Gas Co. is drilling a test on the Mary Maustine No. 2 farm. The Boston-Southwestern Oil & Gas Co. is drilling a test on the Howard Evans farm, and Whipple, Ulrich and others are drilling No. 3 A. R. Zimmerman farm.

Central Ohio

Some well worthwhile oil wells are being developed in the gas fields of Central Ohio, especially from the deep Clinton formation. The East Ohio Gas Co.'s second test on the southeast corner of the Dave R. Anderson 100 acres, Section 24, Hardy Township, Holmes County, is reported good for 125 bbls. from the deep Clinton. This is one of the best completions reported from the old gas field of this county, with the exception of the same company's No. 1 on the Harriett McCullough farm of 85 acres, Section 30, and located 525 feet from the south line and 975 feet from the east line of the lease. This well when drilled in made a fair showing and later was drilled deeper and credited with a flush of 130 bbls. Another new completion in this township is the same company's No. 3 on the W. H. Uhl 20 acres, Section 22, and in the northwest corner of the farm, with a flush reported at 75 bbls. Wells of the caliber of the three mentioned are bound to make the field a prominent one although the cost of operation is large, owing to the great depth in which the pay sand is found.

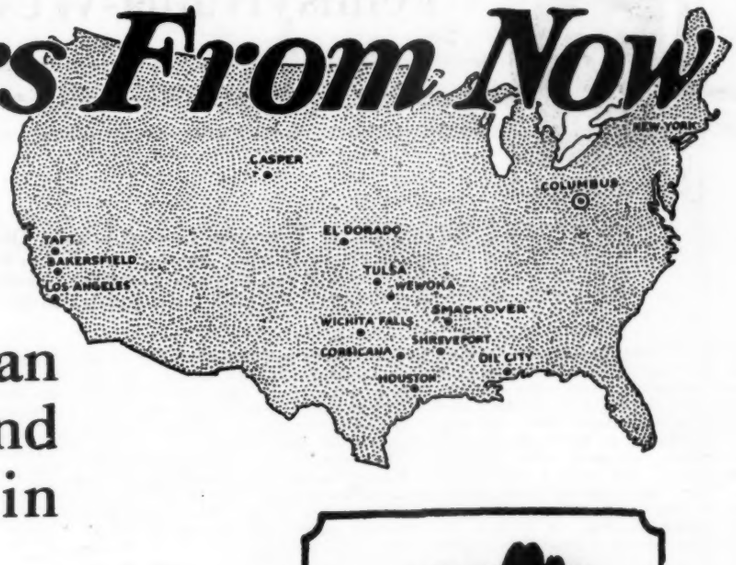
One of the best of the late gas completions in the Central Ohio Field was the Logan Gas Co.'s No. 3 on the northwest corner of the C. and E. Herold 160 acres, Lot 29, Columbia Township, Lorain County, the gas being found in the Clinton at 2,810 feet. Same company's test, 360 feet from the north line and 785 feet from the east line of the Jeremiah Martin 17 acres, Lot 34, same township, proved a duster in the Clinton sand at 2,815 feet. In the same township, the Wiser Oil Co.'s test, 600 feet from the south line and 400 feet from the east line of the M. Squires 56 acres, Lot 34, was a dry hole at 2,790 feet.

In Chatham Township, Medina County, the E. R. Edson Sons Co.'s No. 18 Carl G. Packard farm, Lot 4, pumped 5 bbls. and No. 5, same farm, 5 bbls. In York Township, same county, the Ohio Fuel Gas Co.'s test, 900 feet from the north and west lines of the Ada G. Swartz farm, Section 18, was dry at 3,150 feet and through the Clinton sand. Same company's test in the northeast corner of the Hipolite Karas farm, Lot 13, was dry at 3,100 feet.

In Cannan Township, Wayne County, the Logan Gas Co.'s second test, 1,300 feet from the north line and 300 feet

(Continued on Page 90)

Five Years From Now



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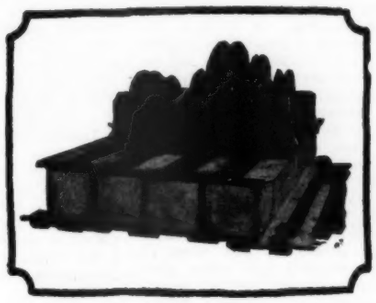

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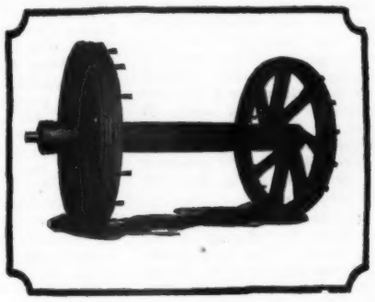

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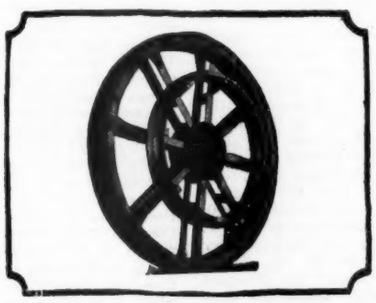

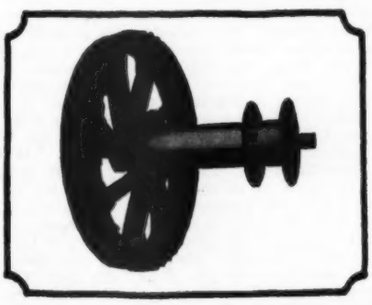

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INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

Pennsylvania-West Virginia

By D. S. Wakenight

Carter Oil Co well in Hanover Township, Licking County, Ohio, flows and swabs 200 bbls.; a second swabs 88 bbls. South Penn Oil Co. has 16,000,000-foot gasser in Logan County, West Virginia. Virginia Gasoline & Oil Co. gets 30-bbl. well in Clay County. Pure Oil Co. completes 35-bbl. producer.

PITTSBURGH, Pa., Aug. 3.—Development work during the past week was almost featureless. Just a few fair producers were completed in the deep sand territory in Southeastern Ohio, and none in West Virginia or Southwest Pennsylvania. July, compared with the preceding month, will make a poor showing. More wells were completed in July than in June and the new production was considerable less.

The consumption of gasoline is greater than at any time in the past. All refineries in Pittsburgh and vicinity are running to full capacity against a probable greater demand for gasoline.

The week of development work taken as a whole was disappointing, despite more wells were completed than during the preceding week. The best oil well completed is the Carter Oil Co.'s No. 5 on the Jacob Vanderbark farm, in Lot 14, Hanover Township, Licking County, Ohio. When drilled in last week it made a good showing and when shot in the Clinton sand last Monday recovered by flowing and swabbing better than 200 bbls. the first 24 hours. In the same township and lot, the same company's test on the Hanover Brick Co.'s property was completed and shot in the same formation. They swabbed 88 bbls. the ensuing 24 hours. A well of considerable importance as a Trenton Fock test started to drill last week. It is W. W. and A. T. Wehrle's test on the Guy McDonald farm, one-fourth mile west of the Pure Oil Co.'s light producer on the Ilena Smith farm, in Franklin Township, Licking County.

One very good gasser and several fair oil producers were the offering in the West Virginia fields. The good gasser is the South Penn Oil Co.'s No. 14 on the Yawkey-Freeman tract, on Crooked Creek of Guyandotte River, Logan district, Logan County. The well has a capacity of 16,000,000 feet in the Maxon sand. In Henry district, Clay County, the Virginia Gasoline & Oil Co. completed in the Big Injun sand No. 3 on the J. B. Casto farm. It is a 30-bbl. producer. This section is beginning to attract attention. This company has rigs up for Nos. 4, 5 and 6 on this tract and a rig completed for a second test on the J. B. Casto 220 acres. The South Penn Oil Co. has a rig up on the O. D. Stockley farm, and in the Union district, the Eastern Carbon Black Co. is drilling No. 8 on the J. Craig & Sons' farm.

On Joes Creek, Sherman district, Boone County, the Pure Oil Co. completed in the Berea grit No. 16 on the Lafollette, Robson & Pritchard tract and good for 35 bbls. a day. On Big Coal River, Peytonia district, the Owens Bottle & Machine Co. got a good gasser in the Big Lime formation at its No. 3 on the Bull Creek Coal & Land Co.'s tract. In Freemans Creek district, Lewis County, the Reserve Gas Co. drilled a deep test on the Alvador Hughes farm to a total depth of 4,675 feet and got a light gasser in the Benson sand.

In Section 11, Perry Township, Licking County, the Arkansas Fuel Oil Co. drilled through and shot in the Clinton sand a second test on the Marietta Bland farm, not good for more than 2 bbls. a day. In Lot 4, Madison Township, the A. H. Heisey Co. completed in the Berea grit a test on the G. C. Owens farm. It is a gasser. In the same township, the Ohio Fuel Corp. has a gasser on a part of the same farm. The same company is drilling a test on the Orville Kiser farm.

In Section 30, Hardy Township, Holmes County, the East Ohio Gas Co. has drilled a second test on the Harriet McCullough farm into the Clinton sand. It is a gasser. In Section 34, Center Township, Noble County, J. H. Yerain & Co. have a very light pumper in the Buell Run sand at a test on the R. E. Merry farm.

Dusters in Jefferson County

Located one-half mile west of New Alexandria, Wells Township, Jefferson County, W. E. Burns & Co. have a duster in the Berea grit at No. 4 on the W. A. Cox farm. In Cross Creek Township, Peters, Heath & Co. completed a duster at a test on the Fell heirs' farm, 1 mile northwest of New Alexandria. Two miles west of the same village, in Wells Township, G. W. Mauer & Co.'s test on the George Vermillion farm is a duster.

In Section 21, Salem Township, Washington County, E. A. Metcalf's test on the Daniel Henneman farm, dry in the Macksburg 800-foot sand. In Section 33, Alexander Wiper and others have a light pumper at a test on the J. J. Wharff farm. It has been drilled through the Macksburg 800-foot sand. In Section 2, Hopewell Township, Perry County, the Imperial Oil & Gas Co. has started to drill a second test on the Ames Wohler farm. In Section 4, Hanover Township, Licking County, the E. H. Everett Co. has started to drill a second test on the Millard F. Romine farm.

In the shallow sand territory, the Southern Oil Co. has completed No. 3 on the D. M. Murphy farm, in Lot 75 Athens Township, Athens County. It is a Berea grit producer good for 10 bbls. a day. In Lot 90, same Township, Whykinset and others have started to drill a test on the E. J. Jones farm. In Lot 2, Alexander Township, the Stewart Oil & Gas Co. is drilling a test on the W. Louther farm.

Washington County

W. F. Meister and others have completed No. 12 on the John Wilfert farm and have a duster in the Macksburg 800-foot sand. In Aurelius Township, J. T. Miller & Co. have a very light pumper in the Buell Run sand at No. 34 on the Elis Driscoll farm. In Newport Township, the Oneida Petroleum Co.'s No. 24 on the J. C. Bosworth farm is a 2-bbl. pumper in the Mitchell sand.

In Section 8, Marion Township, Morgan County, W. H. Metcalf & Co. completed and shot in the Cow Run sand, No. 4 on the Louisa Worthington farm and have a 2-bbl. pumper. In Lot 5, Franklin Township, Licking County, Bishop & Hazlett and others have completed No. 4 on the Martha Gutridge farm, good for 2 bbls. a day in the Berea grit.

In the northwest quarter of Section 33, Marion Township, Noble County, Myers and others have drilled a test on the J. M. Philpot farm through the Berea grit. It is a small gas well, showing a little oil. The location is 1,200 feet northwest of the test on the T. R. Wilson farm. In Section 21, Franklin Township, Licking County, J. T. Bebout has started to drill a test on the Anna Delong farm.

West Virginia

On the waters of Guyandotte River, Logan district, Logan County, the South Penn Oil Co. has completed in the Maxon sand, No. 14 on the Yawkey-Freeman tract. It is a gasser in the Maxon sand, good for 16,000,000 feet. This is one of the largest gassers completed in West Virginia in many months. On Hewitts Creek, in the same district, the same company has a gasser in the Big Lime formation at No. 9 on the same tract good for 1,000,000 feet. The same company has drilled No. 6 through the Berea grit and dry. On Little Coal River, Scott district, Boone County, the South Penn Oil Co.'s test on the Bedford Corp.'s property is good for 800,000 feet.

Gassers in Kanawha County

On Ruffners Fork, Elk district, Kanawha County, the Columbia Carbon Co. has completed in the Big Injun sand, No. 8 on the C. W. Vickers farm. It is a gasser good for 350,000 feet. No. 9 on the same farm is in and good for 950,000 feet. The rig for No. 7 on the same farm has been completed. On Jordans Creek, Big Sandy district, the South Penn Oil Co. gave its No. 6 on the Wesley Strickland farm a shot in the Squaw sand, increasing its production from 3 to 10 bbls. a day.

In Center district, Wetzel County, the Carnegie Natural Gas Co. completed a test on the A. G. Mace farm. It is a fair gasser in the Big Injun sand. In Union district, Marshall County, the Decem Development Co.'s No. 5 on the Phillip Markey farm is good for 5 bbls. a day in the same formation. In Union district, the Wasmuth-Callahan Oil Co.'s No. 4 on the Mary E. Riley heirs' farm in good for 15 bbls. a day in the Maxon sand. In Center district, Wetzel County, the Hope Natural Gas Co.'s test on the Clarence Miller farm is a very light pumper in the Gordon sand. In Church district, the Lemley Brothers Coal & Gas Co.'s No. 3 on the John Booth farm is a gasser in the same formation.

Dry in All Sands

The Re Oil & Gas Co. has drilled in its test on the T. J. Lough farm through all sands and dry, located in Skin Creek district, Lewis County. In Troy district, Gilmer County, the Carter Oil Co.'s test on the Charles H. Osborne farm is a gasser in the Big Injun sand. Elder & Co. have a 5-bbl. pumper in the salt sand at a second test on the J. E. Hardbarger farm, in Clay district, Ritchie County. In Parkersburg district, Wood County, Bowser & Ekas drilled down to the Berea grit an oil well on the Rosa Belle Wentz farm good for 4 bbls. a day. In Washington district, Pleasants County, Dennison Co. have a light show of oil in the Gas Run sand at No. 9 on the A. P. Underwood farm. The Federal Oil & Gas has drilled down to the Big Injun sand No. 16 on the Pell-Newman farm in Spencer district, Roane County. It is a gasser. In Burning Springs district, Wirt County, the same company has drilled down Nos. 3 and 11 on the A. C. Tucker farm. Both are gassers in the Big Injun sand. In Spencer district

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Kentucky-Tennessee

By Vern T. Whitney

BOWLING GREEN, Ky., Aug. 3.—It is very interesting to note the activity being displayed by the major companies and others in securing acreage in the State of Mississippi. While there is not a single well in the State marketing oil at this time, more preliminary work is probably being done than in any other State in the Union.

Since the opening of the new pool at Urania, in La Salle Parish, Louisiana, 60 miles from the Mississippi State line, scouts of many of the larger companies are busy leasing acreage as fast as possible along a general northeast-southwest trend toward the Jackson structure, in Hinds County, a distance of approximately 100 miles. Among the companies represented are the Carter Oil, Gulf Production, Benedum & Trees, The Texas Co., Standard of Indiana, Sinclair, Belvedere, T. B. Slick and many others.

The most closely watched tests at this time are the Willis, at Yazoo City, which is now drilling in the Ripley formation at 2,400 feet with a fair oil and gas showing, and the Reeder well, on the Insane Hospital land, just north of Jackson, Miss., in Section 25-6-1, Hinds County. The latter is the only test at this time being drilled on the Jackson structure; the present depth of the hole is 2,100 feet.

The Finkbine test, in Section 7-3-3, Rankin County, regarded by scouts as the most promising venture undertaken to date, is going ahead at 3,100 feet. No. 1 Finkbine plugged at 3,600 feet, in the Blossom sand, on account of a large dose of salt water, showed quite a flow of crude which tested 42 gravity. The test of T. B. Slick, on the Huffman farm, near Holly Springs, in Marshall County, is being watched very carefully as it is down near the pay sand. This is the second attempt on this tract, as No. 1 was abandoned at 2,100 feet on account of a lost hole.

Kentucky Field

The past week in the Kentucky Field shows 29 completions, 10 failures, 2 gassers and 17 producing wells, with a combined initial yield of 143 bbls. Compared with the previous week this shows the same number of completions, 1 less producer, a decrease of 148 bbls. in flush production, 1 more dry hole and the same number of gassers.

The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Barren	9	6	57	3	0
Warren	3	2	6	1	0
Allen	2	1	3	2	0
Owensboro district	3	2	83	1	0
Johnson-Magoffin	3	3	7	0	0
Lawrence-Johnson	2	2	27	0	0
Cumberland-Monroe	2	1	10	1	0
Floyd	2	0	0	0	0
Greenup	2	0	0	2	0
Total	29	17	143	10	0
Last week	29	18	291	9	2
Difference	0	1	148	1	2

Western Division

The starting of three wells in A[illegible] County features the week in the western division of the Blue Grass State. These tests will be drilled between the old Garrett well, on the south, and the old Mc[illegible]ews and Bledse wells on the north; on the Guthrie farm, at the junction of Harrods Fork Creek and Crocus Creek; one on the J. H. Morgan, on Crocus Creek, and the third on the Sadie Bl[illegible] place, at the junction of Sandlick a Crocus Creek.

Several holes drilled many years in this county, for the purpose of

(Continued on Page 92)

NATURALIZING THE WORLD'S MOTOR FUEL

So this is London . . . . .

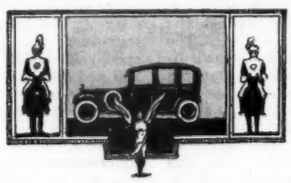
London — with its Trafalger Square — its historic towers — its conventions and its traditions — a city sprung from the marshes along the Thames and towering above its banks like the fog in which she is continually shrouded.

Here we find the Englishman's pleasures exemplified in simple and exacting comforts. When the week's work is done he may drive into Surrey or Devonshire or Sussex or to Brighton in motors that hardly whisper — motors of the Rolls Royce or the Vaux Hall.

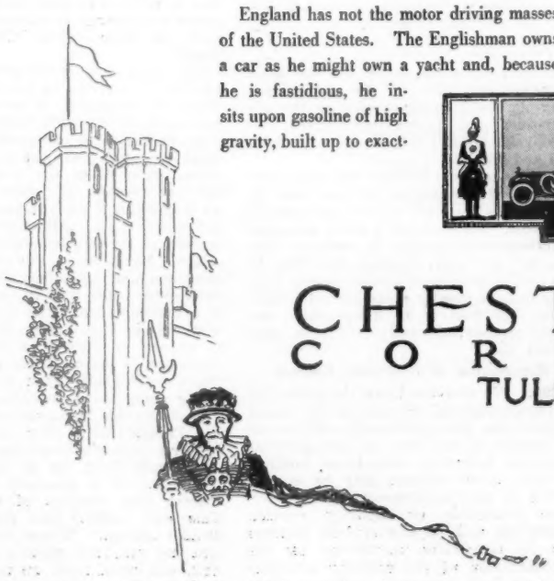
England has not the motor driving masses of the United States. The Englishman owns a car as he might own a yacht and, because he is fastidious, he insits upon gasoline of high gravity, built up to exacting standards and, American refiners, exporting in ever-increasing quantities, find NATURAL GASOLINE an indispensable acquisition.

England is receiving her quota of gasoline from the United States and is a growing market. To meet the demands of England and other foreign customers, and at the same time supply domestic consumption could not be possible except at higher prices were our exporters dependent entirely upon gasoline refined straight from crude oil.

But into this breech steps NATURAL GASOLINE to take its logical place in the economics of gasoline manufacture as a builder of higher quality motor fuel.



Thus Is the World's Motor Fuel Naturalized



CHESTNUT & SMITH CORPORATION
TULSA, OKLAHOMA

129,000,000 gallons of gasoline were exported to England during the first five months of 1925.

Fluid Delivery From Oil and Gas Wells

Features of Producing Field in Hydraulic Control Described. Leading up to Volumetric Control

By Stanley C. Herold
Petroleum Geologist, Stanford University, California

We observed in a previous article that the step in the analysis from ideal performance to theoretic performance is a purely logical one, based upon the laws of physics and mathematics. Definitely specified alterations, imposed upon the conditions of fluid production from the imaginative ideal reservoir, result in a performance which we chose to designate as "theoretic."

The typical procedure in the study of theoretic performance is exemplified by the plan of solution for the problem of Article 372, where the statement was made that, "We shall imagine but one item at a time as being other than ideal. Combined effects may then be determined by uniting the separate effects, in order to suit any particular case." In this manner we come to understand the behavior of water, oil, gas, or combination wells, and to realize that these are never eccentric or erratic, so far as the laws of nature are concerned. The experienced operator is able to recognize facts which we have determined on the basis of pure analysis.

In this, our last installment on hydraulic control reservoirs, we approach a point which appears to indicate a general transition from theoretic to actual performance. Can we say that there is, in reality, a transition between them? No, we can not.

So far as the actual reservoir is concerned, there is no difference between theoretic and actual performance. We can not deny that the actual behavior of a reservoir is precisely that which all the conditions in nature prescribe for it, even admitting our own range of influence upon the flow at the orifice. The well always performs in exact compliance with the combination of natural circumstances existing throughout the internal and external portions of the reservoir system.

Any differences between theoretic and actual performance exist in our own minds. We do not say that differences which we believe are capable of observation are imaginary; they are quite otherwise. Unless we know all the natural circumstances which exist in the entire reservoir system, unless we know their exact combined influence upon the behavior of the reservoir, or unless we have the means of eliminating the necessity for knowing these facts, then will our own state of mind be incompatible with the behavior of the reservoir in its theoretic performance.

We shall now give our attention to the features of a producing field in hydraulic control. We shall briefly summarize the relevant principles which have been discussed heretofore, and intercalate, among the items in review, certain additional facts which are worthy of recognition. In conclusion, we throw open the portal that leads to the study of volumetric control.

A Field Map

395. Figure 395 illustrates a typical map of a producing field. The contours are those of structure; they represent, as usual, equal vertical intervals measured from a convenient base-place. We shall suppose that these contours represent structure at the contact between a productive sand and an overlying impervious shale. Conditions are not perfectly ideal; the sand has, however, a uniform average texture and a uniform average thickness, if we regard these averages as pertaining to unit areas of a reasonable size; say, 1 acre, or 160 acres—whatever may suit our imagination.

The general regional dip is toward the northeast. There are two anticlinal "domes," one of greater height than the other, lying on the same axis of folding, such axis being approximately at right angles to the regional dip. These domes are connected by a syncline, as indicated, to the regional feature consisting of either a geomonocline, or the southwest flank of a geosyncline.

We show but a few wells, although we shall suppose that the field is sufficiently well drilled so that we have been able to determine the location of the edge-water contact, indicated by the dotted line, with a fair degree of accuracy. Within the edge contact is the "pool"; it is one of gas only, or of oil only, or of the two in combination. In the last case, the gas has no defined "pocket" on the domes, but is intimately associated yith the oil throughout the pool, having been entirely in solution before the discovery of the field.

Edge-water Contact

396. Although the edge-water contact is shown to conform approximately to the contours, it must be admitted that the pool will be somewhat pushed over the crest of the domal structures, if accumulation has been effected through the downward migration of water. The push, of course, is in the downward direction of the regional dip, so that the contact lies at a lower position on this side than on the up-dip side of the structures. The pool, we say, lies eccentrically upon the dome. The degree of eccentricity depends entirely upon the physical state of the reservoir interior. A fine-grain sand and a low static pressure, accompanied by slow downward migration, tend to produce this effect only to a slight degree. Converse conditions permit high degrees of eccentricity. In fact, the velocity of migration may be sufficiently rapid so as to exceed the limit of safe eccentricity, continually "sweep" over the crest, and thereby prevent accumulation on the dome.

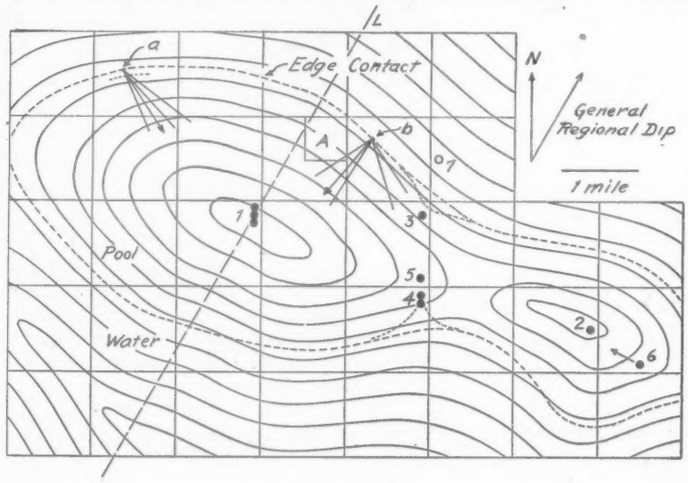


Figure 395

Relation to Earlier Features

397. Figure 395 may be regarded as a map of the right-hand portion of the vertical section shown in Figure 277. Let us imagine the latter figure to represent the profile along the line L in the former. Were L to be extended to the southwest, its section would appear as the left-hand portion of Figure 277. Thus the producing sand outcrops in the hills to the southwest of the area shown.

The rainfall in the catchment basin at the outcrop is sufficient, or more than sufficient, to compensate for the fluid withdrawn from the wells in the field. The static pressure of the field is therefore maintained at a constant value. If the pool is one of gas, then we may say that the mechanics of the reservoir are equivalent to those of the collapsible gas holder of Figure 241. But if the pool contains oil, with or without gas in solution, then the mechanics are equivalent to those of the gravity solution tank of Figure 242. Indeed, we have proven that the primary function curves for delivery from these two type tanks correspond throughout. This is to say, the pressure-time, volume-time (cumulative production), velocity-time (rate of production), acceleration-time, energy-time, and power-time curves are identical as between all these classes of reservoirs. We noted, however, that it is necessary to make an important distinction between the delivery laws for liquid and those for gas, in case the reservoir produces both of these fluids from the same orifice. The volume-time and velocity-time curves for the liquid are the same as usual, but those for the gas, coming with the liquid, change over to the energy-time and power-time curves, respectively, for the very liquid. (Articles 265 and 268.)

The water surrounding the pool, irrespective of the nature of the fluid in the pool, is certainly in the mathematicl reservoir. All fluids in a given reservoir function mechanically in unison. We can not say that, because the fluid in the pool is not water, and because it happens to have greater economic value than water, the pool is an independent, isolated mechanical unit. (Article and Figure 228.)

Recognition of Hydraulic Control

398. We may not know the geological or physiographical features of the region abount this field sufficiently well so as to be able to say that all our specifications for hydraulic control are fulfilled. In fact, these features may be exactly fitting to the requirements, yet we may have volumetric or capillary control. Geological and physiographical features are, by themselves, insufficient for the determination of the control; nevertheless, we hear petroleum geologists making statements and caclulations upon the assumption that their well is producing oil which is "backed up by water," because, as they say, these features are undoubtedly favorable for such a phenomenon.

How, then, are we to determine the control to which our wells belong? First we must recognize the fact that the mechanical features of the reservoir are no less important than the geological and physiographical features. These mechanical features concern, specifically, the relations of pressure, constant or variable, and the physical properties of the reservoir interior, both as to solids and to fluids therein. If, then we have recognized this fact, we are prepared to accept another; namely, that the well itself, by its record, will plainly show us to which control it belongs. (Article 236).

When the pressure is sufficiently great to overpower the forces opposing movement of the fluid within the reservoir, we have either hydraulic or volumetric control; the former if the pressure head on the reservoir is constant during the course of production. If the pressure is not sufficiently great to overpower the forces, we have capillary control. Whether the space within the reservoir is hollow or filled with a porous medium is a matter entirely subordinate to that of opposing forces. (Article 114).

Curves for Hydraulic Control

399. The curves for the primary functions for all reservoirs mentioned in Article 397 correspond throughout. They are either straight horizontal lines or straight inclined lines. Our attention was frequently called to the monotony of style in the formulas and graphs of these various curves. We believe that this monotony has led to confusion in engineering practice; therefore we insisted upon analyzing them in detail with respect to three horizontal axes. These axes are:

(a) The axis determined by absolute zero pressure. This is absolutely stationary, so far as we shall ever know.

(b) The axis determined by the pressure of the atmosphere. This is subject to variation with altitude and weather.

(c) The axis determined by the constant back pressure. Within limits, this axis is arbitrarily fixed by the operator, either temporarily or permanently. This axis we have called "The Potential Axis."

The usual history of producing fields involves alterations in the physical condition of the orifice. If this orifice is one consisting of a single well, it may become necessary to change the equipment upon it, or to change the position of any valves upon it, or the well may "sand up" or choke by other means, or we may clean it after it has been choked for some time. All these alterations pertain to the physical conditions of the orifice. Furthermore, any of the changes upon one well will affect the production from every other well in case the orifice is a multiple one. The drilling-in of a new well in a group, or the shutting-in of anyone of them also constitutes an alteration in the condition of the orifice, which we consider as a unit.

We group these alterations under the title of "Orifice Manipulation." (Articles 71, 72 and 73). Our curves do not appear as straight lines; they are broken, or sharply bent, as in theoretic performance. It is generally sufficient to observe that portions of the pressure-time and velocity-time deal with hydraulic control. Where doubt still exists, we yet have certain tests on the well, and upon these we may rely with perfect safety. These tests first necessitate the segregation of hydraulic controls on the one hand and capillary control on the other. They depend upon the delivery laws of the two finite con-

(Continued on Page 66)

Standard Equipment

Indexed for Reference

THE need for a complete catalog of standard industry equipment and supplies, indexed for instant reference, as well as the constantly increasing size of The Oil and Gas Journal, has suggested the addition of a "What and Where to Buy" directory to the advertising pages of The Oil and Gas Journal which will be found this week on pages 143-144-145.

While the alphabetical index of advertisers will be continued there is now added a detailed classified index enabling buyers to turn at once to the pages upon which the articles in which they are interested are displayed.

Every care has been taken to make this classified index of service to buyers, the groupings being as complete as possible so that immediate reference can be made upon any kind of equipment desired.

Each issue of The Oil and Gas Journal is a veritable Exposition of Equipment and Supplies, every conceivable article in use in the industry being represented in its advertising pages. Buyers of supplies and equipment will find in the new classified index the promptest information as to "What and Where to Buy" from the representative manufacturers and distributors in every section of the country.

The new service will be a regular feature in each issue of The Oil and Gas Journal. Consult it when in need of anything with the confidence that the products listed are the standard in the industry.

MEN KNOWN IN OIL-DOM

A. S. Hardin

Sheldon Hardin, recently appointed president of the Southern Crude Oil Purchasing Company and president of the Southern Pipe Line Company, was born in New Orleans, La., June 30, 1881. He received his early education in the public schools of New Orleans and graduated from the Louisiana State University with a degree of B. S. Although a student of law, he never actively practiced his profession but followed a political career until he entered the oil business in 1918 as an independent operator. Mr. Hardin became associated with Mr. F. H. Wickett, now chairman of the board of the Pan-American Petroleum and Transport Company, and president of the Dixie Oil Company, in 1920, and served under his personal direction until called to assume his present position as executive head of the Southern Companies.

The Southern Crude Oil Purchasing Company and the Southern Pipe Line Company were originally known as the Crusader Oil Company and the Crusader Pipe Line Company, and were subsidiaries of the British-Mexican Petroleum Compay, Ltd., before it was taken over by the Pan-American.

The growth of the Southern Companies, under its present organization, has been meteoric. During the past 60 days, its daily production has increased from 500 barrels to 24,000 barrels, and its pipe line runs and daily shipments have been advanced from 1,600 barrels to an average monthly movement of 1,250,000 barrels. Today, it is second only to the Standard Oil Company of Louisiana in its Arkansas operations, where most of its activities are centered.

The first official act of the present president of the Southern Companies was the purchase of what is known as the "Dashko" well, which has proved the wonder well of Arkansas, having produced at this date in excess of 600,000 barrels of pipe line oil and which is still producing at the rate of 4,700 barrels a day.

PERSONAL PARAGRAPHS

T. A. Sheridan, veteran Kentucky operator, has returned to Bowling Green, Ohio, after scouting the Owensboro, Kentucky, Field.

* * *

R. H. Reese, scout for the Atlantic Oil Producing Company, with headquarters at Lexington, Ky., is in the Mid-Continent fields for his company.

* * *

E. H. Buckner, president of the Houston Oil Company, has returned to Houston from a conference with some of the directors of the company in St. Louis.

* * *

E. De Golyer, president of the Rycade Petroleum Corporation, with New York headquarters, is looking into the company's operations in the Coastal territory.

* * *

J. C. Thomas has been made superintendent of operations for the Texas Production Company in the Big Muddy oil field succeeding J. J. Flannigan, who is now superintendent of operations for the Continental Oil Company in Wyoming.

* * *

William C. Hart, formerly an engineer in charge of one of the large iron mines in Michigan, is in Casper, Wyo., looking after the interests of a group of capitalists of Wisconsin and Michigan who have invested in lands in the Salt Creek Field.

* * *

John M. Dullahan, of the Texon Oil Company's forces in the Big Lake Field, Texas, is in Houston on business. He is well known among oil men in the Gulf Coast region and had charge of the first tests drilled in what is now the Orange Pool.

* * *

Pancho Ortiz, "the pipe line laying champion of Mexico," has sailed from Tampico, where he has lived for 12 years, on the Dutch steamer "Maasdam" for Colombia, where he is under contract to lay the pipe line of the Andean National Corporation.

* * *

W. M. ("Bill") Keck is making an automobile tour of the Pacific Coast and expects to be away for several weeks as stops will be made in Washington, Oregon and British Columbia. Mrs. Keck is also making the trip which is exclusively for pleasure.

* * *

Mr. Stead, of the Alta Oil & Gas Company, has left Burkesville, Ky., for Sistersville, W. Va., to attend the annual meeting of his company. Mr. Stead is in charge of the Alta's new development on the West Fork of Crocus Creek, Cumberland County, Kentucky.

* * *

Lynn Glover of Washington, D. C., and R. G. Stevenson of Hagerstown, Md., have been touring the Cumberland County, Kentucky, Field as guests of the operators at Burkesville, Ky. Mr. Glover represents Eastern parties who are interested in the Texas and Arkansas Fields.

* * *

P. B. Dykeman, oil operator of Riverton, Wyo., was a Casper visitor recently. Mr. Dykeman has extensive royalty interests in the Wind River country and also owns a considerable share in the Sheldon Dome, recently proven productive by the Mack Oil Co. bringing in a gas well there.

* * *

L. C. Harbert, local manager of sales for J. P. Ratigan pumping specialties, of Los Angeles, Cal., has added two new members to his sales force. H. N. Lassiter will travel over Oklahoma and Kansas fields out of the Tulsa office, and J. N. Martin will cover Texas, Arkansas, and Louisiana.

* * *

Vance Rowe, scout for the Carter Oil Company in the Rocky Mountain region, has been transferred from Casper, Wyo., to Tulsa and will work out of this city from now on. At the same time the offices of the Carter Oil Company in Denver, Colo., have been moved from that city to Tulsa and merged with the Tulsa offices.

* * *

E. G. Wright, retired vice president of the Southwest Pennsylvania Pipe Line Company, John Darr, superintendent of the telegraph department of the Southern group of Pipe Lines and J. J. Jenney, general superintendent of the Eureka Pipe Line Company, have returned to Pittsburgh, Pa., after spending two weeks at Cambridge Springs, Pa.

* * *

J. R. Latimer of the firm of Devore and Latimer, drilling contractors of Fort Worth, Tex., returned for a few days from the Texas Panhandle where he has been engaged in the drilling of a number of wells. Devore and Latimer have completed one well for the Gulf Production Company and are drilling one for the Magnolia Petroleum Company.

* * *

James V. Ferguson, special representative of the Williamsport Wire Rope Company, from the factory at Williamsport, Pa., is spending a month in the Rocky Mountain region, visiting the different oil fields in the territory. He spent the past week in Wyoming, and in company with the local manager, H. H. Wrightsman, expects to visit Montana before returning east.

* * *

W. F. Snebold of the firm of Moore and Snebold, Fort Worth oil operators, has spent the past three weeks in southern Palo Pinto County, Texas, in the new area recently opened up by the Pender Production Company. Moore and Snebold have about 900 acres of leases in the vicinity of the new well and have already spudded in their No. 1 Slemmons, three quarters of a mile west of the new producer.

* * *

Leo Steinschneider, chief engineer and director of the Bruenn-Koenigsfelder Engineering Works, Koenigsfeld, near Bruenn, Czecho-Slovakia, will arrive in New York about the beginning of August, and will be located for some three weeks at the Hotel Commodore. Mr. Steinschneider is well known in Europe as the originator of the high vacuum system for the production of high-priced lubricating oils.

* * *

Several Gulf Production Company men are away from their desks attending the National Guard encampment at Camp Stanley, near San Antonio, Tex. Among them are Lieutenant Hugh M. Craig, assistant to the general agent of the company at Fort Worth, and Lieutenant G. M. Douglas of the gasoline department at Fort Worth. W. B. Pyron, of Houston, is also attending the encampment. Mr. Pyron carries the rank of major.

* * *

Dr. W. J. Lange, secretary and treasurer of the Oil Fork Development Company, Inc., of Pittsburgh, Pa., was a recent visitor in the Cumberland and Clinton Counties fields of Kentucky inspecting the leases and holdings of his company, which holds around 17,500 acres of leases in the two counties as well as royalties, production and drilling tools. He expressed the opinion that Cumberland County is due to come into the limelight this year.

* * *

F. O. Martin, geologist for the Union Oil Company of California, who is engaged in exploratory work in Colombia, South America, has been elected a Fellow of the Royal Geological Society (London,) it was stated at Union Oil offices. Mr. Martin became a F. R. G. S. because of the "immensely valuable and difficult explorations he made in the interior of Panama in 1905 and since 1920 in the interior and uncharted regions of Colombia."

* * *

E. B. Coolidge of Lewistown, Mont., spent last week in Casper, Wyo., and the Salt Creek Field. Mr. Coolidge is president of the Hardrock Oil Company, which drilled a well in the southwestern part of the Salt Creek Field a year or more ago, and during his stay in the field arrangements were made to put this well on production. Mr. Coolidge is a prominent member of the newly organized Montana branch of the Rocky Mountain Oil & Gas Men's Association.

* * *

T. W. Moore, well known Coastal contractor, is now with the Texas-Gulf Sulphur Company as superintendent of drilling at Gulf, Matagorda County, Texas, where the company's sulphur wells are located. The territory was formerly known as Big Hill and was opened as an oil pool by the late I. E. (Farmer) Dean, who came to the Coastal regions from Oil City, Pa., about 20 years ago. "Farmer" Dean was prominent in the Pennsylvania oil regions as an operator and political orator during campaigns.

* * *

James W. Stewart, who has been assistant to H. C. Bretschneider, vice president of the Midwest Refining Company in charge of field operations, has been appointed to the directorate of the Midwest, also becoming one of the vice presidents of the company. Mr. Stewart, who is the son of Col. Robert W. Stewart, chairman of the board of directors of the Standard Oil Company of Indiana, entered the oil business as a tool dresser for the Midwest in the Lance Creek Field, working his way up through successive stages to the position of field superintendent. After a thorough training in the practical work of the field department, Mr. Stewart entered the Casper office to learn the business from the executive's angle. The appointment to the directorate of the Midwest Refining Company is a signal honor to be bestowed upon a man as young as Mr. Stewart.

The Following Companies & Contractors are using 100 or more HUGHES TOOL-JOINTS

A

J. S. Abercrombie Company
Agwi Oil Company
Allday Oil Corporation
R. E. Allen
Fred M. Allison
Amazon Drilling Company
Amerada Petroleum Company
Amtorg Trading Corporation
Anglo-Mexican Petroleum Company, Ltd.
Argentine Government Oil Fields, Ltd.
Arkansas Fuel Oil Company
Associated Oil Company
Atlantic Oil Products Company

B

Barkley & Meadows
Bass & Dillard
Belchic & Laskey
Belmont Drilling Company
Belridge Oil Company
Black & Black
Bond & Evans
Brandon & MaCamey
Brea Canyon Oil Company
Broderick & Calvert
F. H. Brown
Vern Brown

C

California Well Drilling Company
Cia Mexicana de Petroleo "El Aguila"
J. L. Collins
Columbian Oil Fields, Ltd.
Consolidated Oil Companies of Mexico
Corona Oil Company
Cortez Oil Company
Cranfill Brothers
Craig & Burns
Crawford & Sebastain
J. E. Crosbie

D

Dabney Oil Syndicate
Daily, Crawford & Pevetoe
Art Delaney
Delaney & Mead

E

A. A. Eason
T. T. Eason
East Coast Oil Company
Edyerly Petroleum Company
Espuela Oil Company

F

Harry Fast
H. A. Farrow
Federal Drilling Company
Fields & Simms
Freeport Sulphur Company

G

G. T. G. Drilling Company
General Petroleum Company
George F. Getty, Inc.
M. E. Glascock
Golding & Cochran
Goodwin & Tippett
Gordon, Folwell & Dixon
Grayburg Oil Company
Gulf Production Company

H

Hamil Drilling Company
Haury, Manahan & Company
Holly Oil Company
Hollyfield & McFarlane
Houston Oil Company
J. H. Hudson
Hub Oil Company
Hughes Drilling Company
Hal Hughes
J. K. Hughes Development Company
Humble Oil & Refining Company
H. L. Hunt

I

Imperial Oil & Gas Products Company
International Petroleum Company, Ltd.

J

J. W. Jameson
A. T. Jergins
Johnson & Rhodes
E. M. Jones
Julian Petroleum Corporation

K

W. M. Keck
Kellogg Drilling Company
Kern Mex Oil Company

L

Ed Laguerre
Lane & Wasson
Lincoln & Lincoln
John Lind Drilling Company
Lion Oil & Refining Company
Loffland Brothers
Loual Drilling Company
Louisiana Oil & Refining Company

M

Mazda Oil Corporation
Charles Maxwell
Marine Oil Company
McKeon Drilling Company
McFarland & Fink
Mexican Gulf Oil Company
E. J. Miley
Mitchell & Jones
Mohawk Oil Company
W. H. Morefield
W. J. Morgan
Harry Moss
Ray Mount
Murphy & Graham
P. J. Murray
Hill Myers

N

Navarro Oil Company
New England Oil Refining Corporation
Robert Newton
Nippon Oil Company
Noble Drilling Company

O

Oakridge Oil Company
Okane & Brane
J. W. Olvey

P

Palmer Corporation
W. T. Parker
Patrick Drilling Company
Penn Mex Oil Company
P. C. Perry
W. M. Priddy
Prince & Prince
Pugh Miller Drilling Company
Pure Oil Company

R

Rex Drilling Company
Rice Ranch Oil Company
Sam Richardson
Richfield Oil Company
Rogers & Edwards
Rowan Drilling Company
Roxana Petroleum Corporation
Rycade Oil Company

S

Schroeder Drilling Company
Sentinental Oil Company
J. C. Shaffer
Shaner Drilling Company
Sheldon & Burden
E. D. Shell
The Shell Company of California
The Shell Company
Simms Oil Company
Sinclair Oil Corporation
R. E. Smith
Sloan & Rethman
Smitherman & McDonald, Inc.
The South American Gulf Oil Co.
Southern California Drilling Co.
Spencer & Rhodes
Standard Oil Company of California
Standard Oil Company of Louisiana
Standard Oil Company of New Jersey
D. N. Stewart
State Consolidated Oil Company
Stroube & Stroube
Sturm Drilling Company
The Sun Oil Company
Superior Oil Company
Sure Oil Corporation
Louis Sykes

T

Taft Well Drilling Company
A. F. Tarver
Texas Company
Texas Gulf Sulphur Company
Triangle Drilling Company
Trinity Drilling Company
Trinidad Lake Petroleum Company
Trinidad Leaseholds, Ltd.

U

Underwood Drilling Company
Union Oil Company of California
Universal Consolidated Oil Co.
United North & South Oil Co.

V

Vacuum Oil Company
V. K. F. Drilling Company
S. J. Venable
Venezuelan Sun Oil Company
Vinton Petroleum Company

W

Walber Drilling Company
Frank Wallace
Joe Walton
Whelan Drilling Company
Whitehall Petroleum Company
Wilshire Oil Company
Witherspoon Oil Company
Herman Woodruff

Y

Yount Lee Oil Company

HUGHES TOOL JOINTS

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Supply Stores Everywhere

HUGHES TOOL COMPANY

Branch Plants
LOS ANGELES, CALIF.
OKLAHOMA CITY, OKLA.

MAIN OFFICE AND PLANT
HOUSTON, TEXAS

Export Office
NEW YORK CITY

EQUIPMENT AND SUPPLIES

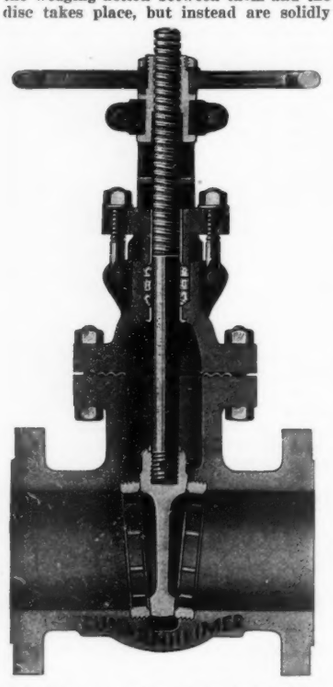
NEW LINE OF IRON BODY GATE VALVES

The Lunkenheimer Co. of Cincinnati, Ohio, manufacturers of valves and engineering appliances, has just released to the market an entirely new line of iron body gate valves, containing many structural features.

The valves are made in two types—stationary stem, inside screw and rising stem, outside screw and yoke. Either type may be had in the standard pattern for 125 pounds working steam pressure of in the extra heavy pattern for 250 pounds—total temperature being 450 degrees Fahrenheit. They are furnished in all standard sizes.

The design of the bodies with their ample thicknesses of metal properly distributed and having large fillets, insure, the manufacturers say, to the maximum degree, that strength and rigidity so essential to withstand the strains incident to expansion and contraction.

All parts are renewable and this includes the seat rings. Attention is directed to the manner in which the seat rings are held in place. They do not form a joint with the body by the usual means of a small flange on their seating surfaces, which is depended upon to prevent the seats from dislodging when the wedging action between them and the disc takes place, but instead are solidly



backed by the walls of the body, thereby preventing any possibility of their becoming loose or being wedged out of place.

The ribs which act as guides for the disc and which are cast integral with the body are actually machined as are also the grooves in the disc which engage the ribs. The "side-play" of the disc is controlable by this finishing process and consequently the disc does not drag upon the seats nor touch them until the valve is fully closed. Therefore, the excessive wear and marring of the seating surfaces incident to the dragging of the disc upon the seats is eliminated and the life of these parts is prolonged.

The disc of the inside screw, stationary stem pattern is hollowed only to the extent sufficient to receive the stem. That of the outside screw and yoke, rising stem pattern is solid throughout. The advantage of a solid disc is that when expansion and contraction occurs, both sides of the disc are simultaneously effected, thereby preventing distortion or fracture and insuring tight seating surfaces.

The exceptionally deep stuffing box provides a large packing surface. The stuffing box is repackable under pressure when the valves are wide open—a tight seat being formed between the top of the disc and the bottom of the stuffing box bushing.

One of the novel features is that of the two lugs provided within the yoke arms directly above the stuffing box gland. When it is necessary to repack the valve, the gland is raised above the lugs and by slightly turning it, the flange on the gland will rest upon these lugs, thereby dispensing with the usual method of tying up the gland while the stuffing box is being repacked.

For handling cyanides, creosote, alkaline solutions and other fluids which attack bronze, but not iron, the "all-iron" type of the standard pattern is furnished. The standard pattern is also made in the quick-operating type with lever control. Electrically and gear operated valves of both standard and extra heavy patterns also form part of the Lunkenheimer new line of gate valves.

The Lunkenheimer Co. has recently issued an attractive brochure portraying their new line. A copy may be had upon application.

COMPRESSING STATION AT DILWORTH FINISHED

BARTLESVILLE, Okla., Aug. 2.—The Dilworth compressing station, recently completed in Kay County by the Empire Companies at a cost of approximately $75,000, is handling gas through the new Wichita pipe line, serving also Wellington, Hutchinson, Newton and other Kansas cities on the western portion of the Empire pipe line system.Two Cooper twin engines of 160 horsepower each comprise the main station equipment.

The compressors, prior to being put into service, were operated to supply air in testing the new pipe line. Progressive tests of 5-mile sections were made, the line being stopped with blind disks. At Wichita, portable compressors were used, the tests proceeding from both ends of the line. All construction debris was blown out with the compressed air, conserving a considerable volume of gas. Final high-pressure tests were made with gas. The United States Bureau of Mines cooperated with the Empire in the tests.

NEW SMALLER SIZE IN BELT FASTENERS

A new smaller size has been added to the line of Flexco H. D. Belt Fasteners. The new size is intended for use on belts from one-fourth to seven-sixteenth-inch thick on both conveyor and heavy duty power transmission service. It, like the four other members of the series, provides a tight butt joint with a great surplus of strength.

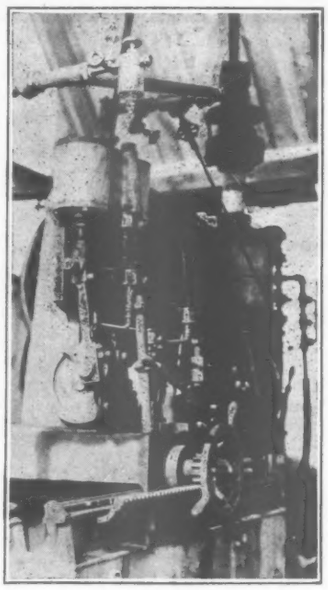
Interesting tests with this new size fastener by the manufacturers, the Flexible Steel Lacing Co. of Chicago, have extended over many months and the final offering is known as the No. 1 size.

Each unit of this fastener consists of an upper and lower plate and two special bolts and nuts. The pressure of the plates, drawn together with a wrench on the bolts and nuts, compresses the belt end giving a considerably stronger joint than one which might pull against the bolt holes only. The manufacturers will supply samples of these fasteners, free of charge, upon request of interested parties.

COREDRILLOGY EXHIBIT ON DISPLAY IN TULSA

Owing to the valuable and interesting subsurface geological work disclosed by core drilling in Kansas, Texas and Oklahoma during the past year, core drills are being adopted by the geological departments of the major oil companies and interest in their field operations is attracting the oil fraternity in general.

At the present time wells for oil production are drilling with Sullivan Diamond Core Drills in Texas and in Okla-



homa, which will reveal important geological information pertaining to all sands, contacts of strata, and in addition will locate desirable casing seats, and give accurate knowledge where to place shots, which in the past has been done with no great amount of accuracy.

To those interested in core drills detailed information and an interesting exhibit of geological formations obtained by Coredrillogy (this is to be copyrighted) are on display at room 505 Atlas Bldg., Tulsa, Okla., the new offices of Geo. E. Failing, State agent for Sullivan Diamond Core Drills. Their special representative, L. H. Keller, who has been actively engaged in core drilling for oil structures and production with Sullivan Diamond Core Drills, will be glad to give detailed information pertaining to the methods, costs, and possibilities of this advancement of oil field operations.

NAMED DISTRICT MANAGER

The Robert W. Hunt Co., inspecting, testing and consulting engineers, with general offices at Chicago, Ill., announces the appointment of Fred M. Randlett as district manager of the Pacific Northwest territory. Mr. Randlett has been chief engineer of the water department of Portland, Ore., for eight years, during which time he had direct charge of the large and important addition to the water supply and distribution system of the city of Portland; previous to that time he was engaged in the engineering department of the New York, New Haven & Hartford Railway and Stone & Webster, Inc. Mr. Randlett is a member of the American Society of Civil Engineers, the American Water Works Association and various other engineering societies. Mr. Randlett will have his headquarters in both Portland, Ore., and Seattle, Wash.

SELECTIVE GEARS AID IN USE OF DITCHER

Although digging in many places through the hardest clay, the next thing to shale, the Barber-Greene ditcher is producing lower costs and getting the trench opened much faster than with hand labor, according to Thomas L. Amis, superintendent of water and sewer department, city of Shreveport, La. The machine is standard with an 18-inch by 7-foot digging boom, and is being used to cut both main and service trenches.

The standard Barber-Greene ditcher is equipped with two sets of selective gears, similar to those used in trucks. The first is at the engine, and controls all of the mechanism on the machine. By

shifting this into second speed it is possible to run the bucket line and the tractors at double speed. The second set controls only the speed of the tractor. By shifting these gears the proper speed to meet the conditions can be selected as quickly as gears are shifted in a truck or passenger car.

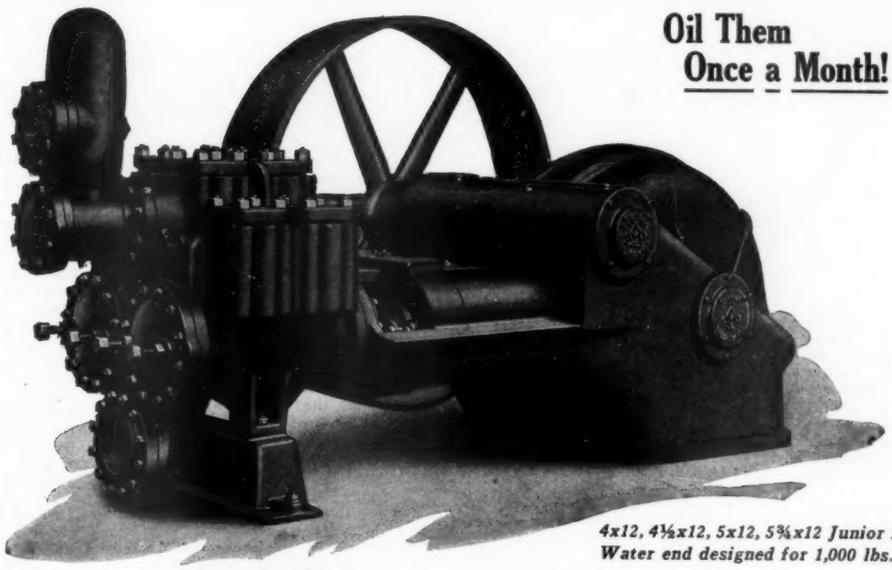
Where it is known that the machine will encounter niggerheads and similar casual obstructions, a special low gear to run the buckets themselves at the reduced speed of 100 feet per minute is installed. This especially slow speed of the bucket line makes it possible to drag out stones with a slow steady pull not possible otherwise. When it is desired to cut only a shallow ditch, as in pipe line work, the standard machine is equipped with a new set of gears which give its tractors a traveling speed of 10 feet per minute, maximum. Near San Angelo, Tex., on a recent job, the Oklahoma Contracting Co. used a Barber-Greene, with which it is stated they frequently dug more than 5,000 feet in 10 hours.

DETAILS PRECAUTIONS IN OXWELDING WORK

The Oxweld Acetylene Co. of Chicago, Ill., has issued a book devoted to precautions and safe practices in oxwelding and cutting.

With the gradual extension of this equipment as applied to oil field operations this book should be brought to the attention of all those who are responsible for, or interested in the elimination of accidents that might occur from work of this character.

The Oxweld process is not hazardous as insurance and casualty records have demonstrated, but with it as with gas, steam or electricity, common sense must be used, and some precautions must be enforced. The Oxweld book has been prepared to provide a brief and practical list of "Do's and Dont's," which men may understand in order to take the care necessary to the safe and economical use of the oxy-acetylene processes. Printed copies of this book will be supplied free upon application to the Oxweld Acetylene Co.



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NATURAL GAS DEVELOPMENTS

NATURAL GAS PROGRESS IN SOUTHERN TEXAS

HOUSTON, Tex., Aug. 2.—The Moody Gulf Gas Co. has been organized with a capitalization of $750,000 of 7 per cent preferred cumulative stock and $10,000,000 common stock. The directors are: W. L. Moody, III, vice president City National Bank, Galveston; H. L. Stark, Orange, Tex.; R. A. Crawford, vice president Lone Star Gas Co., Dallas; O. R. Seagraves; E. C. Connor, chief consulting engineer, Lone Star Gas Co.; R. S. Lord and B. E. Hepler, president and vice president respectively of the Hope Engineering Co., and W. J. Morris and C. H. Booth, of the Youngstown Sheet & Tube Co.

The company, it is reported, has taken over the leases of the Moody-Seagraves interests in Refugio, Matagorda, Jackson and other counties, as well as the small line into Corpus Christi, Sinton and Robestown. The new corporation proposes to lay a line from its southwest territory into Houston. It is reported the Hope Engineering & Supply Co. will lay the line and the Youngstown Sheet & Tube Co. will furnish the pipe.

The Houston Pipe Line Co., a subsidiary of the Houston Oil Co., is now laying a line from its gas territory in Live Oak, Refugio and Jackson Counties into Houston, with a branch to Gulf, Matagorda County, to furnish fuel to the Texas Gulf Sulphur Co. there.

Concerning the report that the new corporation would supply Houston and Galveston with natural gas, H. E. Danner, commercial manager of the Houston Gas & Fuel Co., which manufactures gas, said: "No contract has been let for the distribution of natural gas here, to my knowledge. If this gas becomes available for use in Houston and proper negotiations can be made that will benefit the people, there is no question that a contract or contracts will be entered into. As yet, however, this natural gas is only a prospect."

The Booth interests have made a preliminary survey for a gas line from the Webb County gas districts to San Antonio.

Much has been said and written within the past six months concerning natural gas in the southwest counties and its use commercially. The real truth is that its use commercially is un unknown quantity in that no practical operations have been made yet. The magnitude of the supply, how long it will last when drawn upon and the life of the gas sands are all engineering estimates. The only natural gas company in the Southwest, whose operations extend back over a period of time sufficient to furnish reliable data, is the Border Gas Co. at Laredo. Even the demands upon it do not commence to compare with the demands on gas concerns in North Texas or Oklahoma, or North Louisiana.

The Houston Oil Co. has five wells shut in on the Cartwright ranch in Live Oak County, which, together with other wells, cover about 8 miles of tested territory. However, it has never been drawn upon. That company is now drilling a gas test in Refugio County and another in Goliad County. It has just abandoned two gas tests west of Edna, Jackson County, as failures, and started a third.

The Moody Gulf Gas Co. has, it is reported, acquired the Pratt-Hewitt wells in Refugio County and the Jackson County Syndicate's prospect in Jackson County, west of Edna. It is also drilling a test in the Markham Pool in Matagorda County. The Moody-Seagraves interests secured a charter from the city council of Victoria, Tex.

The Oil and Gas Journal has reported the progress of the Houston Pipe Line Co., laying 18-, 16-, and 12-inch pipe from Lucas, Live Oak County to Victoria, and a branch from Jackson to Gulf. A contract has been let for the balance of the large sizes of pipe necessary to bring the line through to Houston Ship Channel. This in brief sums up the natural gas situation in South and Southwest Texas.

Cocke and Turner, of Houston, have been awarded the contract by the Commercial Natural Gas Co. to lay 70 miles of gas line from the Waskom gas district in Northeast Texas to Longview and Tyler, Tex. The first 36 miles will be 10-inch pipe and the remainder 8-inch. The contract calls for the completion of the line by January 1 next.

The Lone Star Gas Co. is preparing to lay lines from South Oklahoma to Paris and Greenville, Tex., and from the Fox district to Fort Worth and Dallas to augment to the present supply in these cities. These extension call for approximately 200 miles of 18-, 16-, 14-, 12- and 8-inch pipe. The cost of the contemplated work is placed at $7,000,000.

TAMING WILD GASSER IN REFUGIO COUNTY

SAN ANTONIO, Tex., Aug. 2.—Steve Blount is back from Refugio County, where he tamed probably the biggest wild gas well ever harnessed in Texas. Mr. Blount is the supervisor for this part of Texas for the oil and gas division of the Texas Railroad Commission. The well that he harnessed is George E. Smith's No. 1 Wilson Heard, near the town of Refugio.

The gauged rock pressure of the well is 935 pounds to the square inch and the gauged volume 72,000,000 feet per day. This one well makes about 10 times as much gas in a day as the city of San Antonio is using. It is one of the biggest wells ever successfully completed in Texas.

When the well first came in it made some sand and the sand cut away the first joint of casing, and cut the derrick so badly that the derrick had to be pulled down with a tractor and got out of the way. It was 22 feet from the surface of the ground down to the second joint of casing. The escaping gas made a small crater. Beginning back about 80 feet a tunnel was cut to the top of the casing. A gin-pole was erected for handling the tools, valves and casing. The well was cased with 6⅝ casing but not cemented at the bottom. A swedged nipple with dye threads swedged out to 8-inch at the top and connected to a length of 8-inch casing was inserted into the 6⅝-inch casing. Then the split collar of steel was put over the whole connection at that point, taking in the lower part of the 8-inch casing and the upper part of the 6⅝-inch casing.

The ground was excavated 4 feet below this connection and a concrete block was built up to the surface of the ground above, using a carload of sand, one of cement and one of rock and weighing all told 135,000 pounds. Valves were placed on the 8-inch for controlling the well.

It is claimed there is not a leak anywhere. The job was handled without serious accident except that one man got a leg broken and another was buried in the tunnel for a few minutes but was quickly released without injury.

Over 2,000,000,000 feet of natural gas wasted out of the well while it was out of control for a month, according to estimates.

PREPARING GAS RATE MAP

B. P. Stockwell, gas and electric engineer of the Corporation Commission of Oklahoma, has in an advanced stage of preparation a curve showing present gas rates for all Oklahoma cities and towns.

GAS COMPANY REFUSES TO MAKE HIGHER RATE

A rather unusual example of a public utility company's refusing to take advantage of a decision to charge the full amount permitted by a representative of a court was provided by the New York & Richmond Gas Co., which has approximately 23,000 consumers on Staten Island.

W. J. Welsh, president, announced that the company would charge only $1.45 per 1,000 feet for its gas, although a decision of Appleton L. Clarke, appointed special master to study the Staten Island gas situation by United States District Court Judge Marcus B. Campbell, recommended that it be allowed to charge $1.55 a thousand. The court has not yet acted. Mr. Welsh said the $1.45 rate could permit the company to make a reasonable profit, would not be confiscatory and was satisfactory to the company. Mr. Welsh added that the rate of $1 or $1.20 a thousand, to which the company had objected, would not permit the company to give adequate service and a fair return on the company's investment and would therefore be confiscatory.

Under the terms of the decision the company gets a permanent injunction restraining the Public Service Commissioin or the Attorney General from forcing the company to sell gas at the $1 or $1.20 rate. At the time the litigation begun the company was required to put up a bond sufficient to provide for a refund to its customers of any amount charged over $1 per thousand feet in case the court held the $1 rate to be constitutional. Many of the company's customers expressed disappointment that they would not get any of this money back. No notice of an appeal from the special master's decision has yet been filed.

NEW PIPE LINE OUTLET FOR ELK COUNTY GAS

BARTLESVILLE, Okla., Aug. 2.—A 12-inch welded pipe line 60 miles long, between their Cambridge and Petrolia gas compressing stations, has been announced for early completion by the Empire Companies. The cost is estimated at $1,500,000. Acquisition of right-of-way is about complete.

The line will be almost wholly within Elk and Wilson Counties, Kansas, and pass through considerable acreage that has been only partly developed. Greater assurance of adequate service to the Kansas Citys, Topeka, Ottawa and other cities on the Kansas Natural lines of the Empire system will be provided by the new line.

Two additional compressing units are being installed at the Petrolia station at a cost of $200,000. An additional unit will be added also at the Cambridge station.

Elk County gas now directly available only to the western side of the Empire pipe line system may find ready outlet to the east, bringing this gas nearly 100 miles nearer the cities on lines north of the Petrolia station. The increased marketing facilities should lead to a complete development of the field.

PACIFIC GAS EXPANSION

LOS ANGELES, Cal., Aug. 2.—Payment of the regular quarterly dividend of $2 a share has been ordered on the common stock of the Pacific Gas & Electric Co. Accompanying the notice of payment, a statement of earnings of the company for the 12 months to May 31 shows an increase of $4,782,188 in gross operating expenses over 1924 and an increase of $1,212,835 in net income for the same period. After providing for bond interest and discount, for depreciation, reserve and accrued dividends on common and preferred stocks, the statement shows a balance of $784,343, representing a gain of $134,767 for the period covered. The company's program of expansion and improvement of its service for the year 1925 approximates an expenditure of $30,000,000, the announcement shows.

OKLAHOMA NATURAL CO. TO LAY ANOTHER LINE

Announcement of a 1925 construction program involving an estimated expenditure of between $2,000,000 and $2,500,000 has been announced by the Oklahoma Natural Gas Co. from its general offices in Tulsa. The largest unit in the new construction will be a 16-inch line 41 miles in length extending from a point 4 miles south of Depew, in Creek County, down through the Cromwell territory to a southern terminus in 33-8-8, southeast of Wewoka, in Seminole County. Eight-inch laterals will go out from this line into nearby gas producing territories. Equipment is being distributed along the route, a large warehouse is being established at Bearden, Okla., and pipe deliveries are expected to commence about August 1, according to R. C. Sharp, vice president of the Oklahoma Natural.

The Depew-Kelleyville and Kelleyville-Tulsa lines are loops to the big main line which extends from Grady and Stephens Counties, in southern Oklahoma, up through the Chickasha Field, Oklahoma City, Chandler, Sapulpa and to Tulsa.

Another piece of construction work now in progress is the installation of a compressor station at Lohman, Osage County. A vast amount of work is also being done in the various cities and towns served by the company. The construction work is under the personal supervision of A. W. Leonard, vice president of the Oklahoma Natural and recently elected president of the Natural Gas Association of America.

The Oklahoma Natural, according to its officials, will have approximately 1,600 miles of main lines when the present program has been completed. Its operations are confined entirely to Oklahoma and it serves gas to 42 cities and towns, distribution being handled directly in 30 municipalities, while the gas is delivered to distributing companies at the city borders of 12 others.

GAS EMPLOYES ENJOY THEIR ANNUAL PICNIC

OIL CITY, Pa., Aug 2.—The seventh annual picnic of the United Natural Gas and The Mars companies held at Monarch Park attracted the largest crowd of employes, their families and friends since the institution of the picnic and reunion. The actual registration showed the number to be over 2,100. The committees had prepared an extended entertaining program, the first heats of the Mason cup dash starting an interesting program of athletic events that ended with the finals in the cup race, won this year by a new man, Orvis Hidinger of the Millstone Field. This is the fifth year of the competition for the Mason cup and on each occasion a new man has stepped in as a winner, the conditions being that the employe winning the cup twice will have permanent possession.

The time from 12 to 2 o'clock was profitably spent in the picnic grove, where the inner man was taken care of and stabilized for the round of entertainment provided for the afternoon, concluding with dancing in the casino, which attracted a capacity crowd and happily ended a big day for the gas men.

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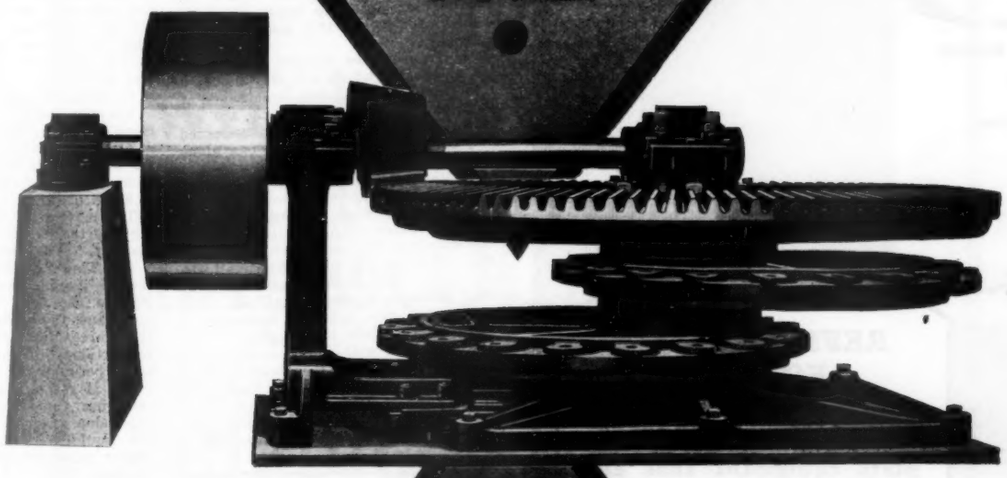

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FLUID DELIVERY FROM OIL AND GAS WELLS

(Continued from Page 56)

trols, so we leave them for consideration at an appropriate time.

We have said that hydraulic control is a special case of volumetric control. This accounts for the segregation just stated. A further test is necessary to make the distinction between these two related controls. Mechanically it is a very simple one, yet it offers considerable difficulty because it requires the simultaneous shutting-in of all wells in the field. Thus only can the true static pressure be determined by the method outlined in Article 234. If any of the wells are flowing, the computations give an apparent static pressure. (Article 301). But seldom will this procedure be found necessary.

Features of Production

400. Assuming that we are satisfied that the field illustrated by figure 395 is of hydraulic control, we shall proceed to consider its features of production. The following discussion is not offered as something new; rather it is offered as something true. We are to reiterate the old principles, originally held by all of us, promiscuously applied, at one time, to wells of any of the three controls, and subsequently thrown into the discard because they so frequently failed us. Of course, they failed us when we attempted to apply them to reservoirs of volumetric and capillary controls.

401. Granting the absence of subordinate structures which are not indicated on the map, and granting the absence of spaces within the sand which are entirely surrounded by tightly cemented sand, the south well at No. 1 can alone produce all the fluid in the pool except that within the closed contours on the minor dome. The three wells together can produce the same amount of fluid in somewhat more than one-third of the time required for one well. (Article 340). Well No. 2 can produce all the fluid in the pool except that within the closed contours on the major dome. We see that but two wells are necessary to obtain all the fluid in the pool.

Assuming all well conditions equal, including the value of the constant back pressure, No. 2 can produce fluid more rapidly than a single well at No. 1, because its greater potential pressure provides a greater residual pressure. (Article 289).

Well No. 3 is a producer, but it does not have a favorable location for total amount of fluid from the pool. It is down the structure and near the edge contact. If the pool is one of oil with gas in solution—a combination reservoir—its location is exceedingly unfavorable. The rate of production must be held at a low point in order to minimize the differential jamin effect. (Articles 375, 379 and 380). Soon after being brought in, the well must begin a partial production of water, and so continue to do this throughout its economic life. The increase of back pressure decreases its proportional production of water, but, if too much back pressure is applied, the rate of production of oil will also be cut down. By experiment the proper back pressure may be determined, thus obtaining the greatest possible production of oil per day.

402. The wells at No. 4 are farther from the edge contact than No. 3, but this advantage is offset by the fact that there are two wells to pull on the water. Matters are still worse for No. 4 on account of the presence of No. 5 behind it. With care, No. 5 can produce oil at a moderate rate and let No. 4 have all the water coming toward it.

Each well pulls down on the pressure gradient of every other well in the field. (Article 391). Each well is pulling the fluid away from every other well. An outlying well, such as No. 6, is affected by all other wells. Its fluid is pulled in a direction toward their "centroid," or center of mass, of production as indicated by the arrow.

Well No. 7 has no opportunity of producing fluid from the pool. To record it as a dry hole may confuse an engineer in subsequent years if he is called upon to diagnose the past performance of the field. The fact that the well can produce water is an important one, and, inasmuch as the well is drilled in, data on its production of water should be observed and recorded for future reference.

If No. 7 is allowed to flow continuously, it has the same mechanical effect upon the other wells in the field as it would have in case it were a producer of oil and gas. Its pull on the pressure gradient of the other wells may be of small magnitude; nevertheless, it is a finite amount. Imagine many wells in a similar location, flowing continuously, and the pull becomes appreciable. This well is a detriment to the field at large when it flows. It causes a decrease in the daily rate of oil and gas production in the field. The rate of production is an important economic feature for the reason that it has a strong rival in the rate of interest on capital invested.

As a matter of fact, No. 7, benefits No. 3, if allowed to flow, particularly if the reservoir is a combination one. It pulls the edge contact away from the latter well, thus aiding it in the proportional production of oil.

Water Encroachment

403. We see how the complete drainage of the pool is possible. It follows that the encroachment of water on all wells is inevitable. Wells farther down the structure are the first to suffer. If, in the end, the pool is to be stripped, the wells at 1 and 2 are the logical ones for the operation. At these, when the edge water has become bottom water, care is necessary in order to obtain the last of the oil. There is less difficulty if the pool is of gas only.

We may briefly investigate the movement of points on the contact, such as a and b. For every barrel of oil, or for every cubic foot of gas, withdrawn from the pool, these points move through a finite distance.

The movement of a point on the contact is the result of all forces acting upon it. What forces are present?

(a) There is the force accompanying radical motion toward every producing well in the field. By Torricelli's Theorem and the principle of radical flow, this force, for each well, is inversely proportional to the square of the distance between the point and the well.

(b) If gas is present, there is a counteracting force accompanying the gas expansion gradient which tends to drive the liquid back toward the region of higher pressures on the kinetic gradient. (Article 361).

(c) Frictional forces opposing flow, There is a loss of pressure according to the valve of the exponent zeta in the equation for the pressure gradient. Mechanical energy is converted into heat at the expense of available working pressure. (Article 346).

(d) Forces due to differences in viscosity of fluid inside and outside the pool. Also forces due to differences in Jamin action for the liquids, if the reservoir is a combination one. (Article 375).

(e) Forces due to differences in specific gravity of fluids. These are brought into action because the reservoir is not perfectly horizontal.

The resultant of these five forces, some of which are collinear, is indicated in the figure by an arrow. It determines the path and the velocity of movement for the point. The arrow serves for only an instant of time, since a new resultant comes into action as soon as the point has moved from its original position.

If water is still migrating down the regional dip, it strikes the pool on the southwest side, and is thrust to both sides, passing around the ends of the domal structure. There will be a tendency for the contact to move on the southwest side at a more rapid rate than on the northeast side. The push which the water exerts upon the pool is fundamentally a gravitational force, although it is now directly due to the momentum which the flowing water has acquired.

Offset Wells

404. What significance has an offset well in such a reservoir as we now depict? By offsetting, the neighboring property holder gets a well down to the

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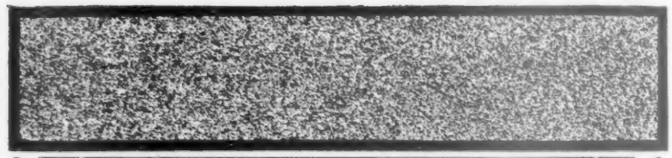
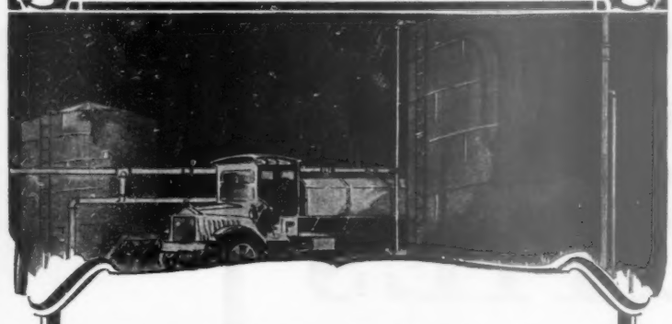


ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL



There are no "get ready" delays on a construction operation entrusted to the Hope Company—because the Hope engineering and construction organization is always ready, with personnel and equipment.

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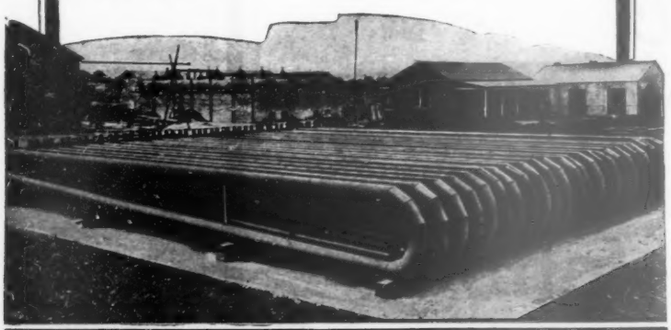

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sand under conditions of structural location most nearly approximating those of the original well. He has an equal chance of producing as much oil or gas per day, for as long a time, as the holder of the first well.

The fluid which is not produced by one well is produced by another. Among those properties overlying the same contours, the one under the possession of the man who drills the most wells, drills them the soonest, and reduces the external friction and constant back pressure to the lowest amounts, will produce the greatest quantity of fluid. Unfortunately for the owner, and fortunately for other holders in the field, there is a limit to the practicability of such a program. The limit is determined by two items:

(a) Forf a given reservoir, there is a minimum value of zeta, the exponent in the equation for the pressure gradient. Beyond a definite point, a more rapid production from a single or multiple orifice is impossible of attainment. (Articles 339 and 340).

(b) The phenomena of edge and bottom water must be taken into account. (Articles 375 and 380).

Recovery of Fluid

405. Granting the absence of subordinate structures which are not indicated on the map, and granting the absence of spaces within the sand which are entirely surrounded by tightly cemented sand, 100 per cent of the flowable oil or gas is recoverable from this type of reservoir.

A definite and determinable amount of fluid is "absorbed" on the surface of the solid material which makes up the porous medium and walls of the reservoir. In the case of oil, this absorbed fluid is visible in samples of the producing sand, and is sometimes mentioned as "the oil which paints the grain of sand." Absorbed gas is not visible; nevertheless it is present. Absorbed oil and gas is not flowable; it has not been flowable since the time when it first came in contact with the solid matter; it is not in our potential reservoir. (Articles 109 and 39). It can not be regarded as fluid, because it is as fixed in place as the solid matter to which it is attached. Like solid matter, it is removable by abrasion, by chemical solvents, or by the application of heat. Being in the nature of a solid, it has never manifested itself in the records of the well's performance, and never will do so. Only matter which is able to flow can give evidence of itself in pressure, volume, velocity, acceleration, energy, and power at the mouth of the well. By these functions shall we know a well, have a well, and benefit from a well.

One hundred per cent is recoverable. What per cent is actually recovered? The recovery by a minimum number of wells depends upon their suitable location. If there are subordinate structural and textural features present, the number of wells required for approaching 100 per cent recovery is necessarily greater than where such are absent. Since we frequently can not be certain in regard to these subordinate features, our only recourse is to put down more wells than our limited knowledge of conditions calls for. May we not have technical justification for close drilling in some of our hydraulic control fields.

406. If we consider small parcels of land overlying the pool, what significance has the expression, "recovery per unit area"? All wells are producing from the entire pool; not from a restricted are within the pool. Oil and gas are known to travel several miles in some of these fields, in order to reach the bottom of the well. This knowledge is based upon the following class of data:

(a) The average thickness of the producing sand in the drilled area.

(b) The average amount of pore space per cubic unit of formation.

(c) The total production from the well, or group of wells, in the field.

The results of calculation have often been of a startling nature.

In Article 392 a technical use for facts regarding the recovery per unit area was indicated, but these facts pertain to the entire area covered by the pool during its history of shrinkage. Calculations based upon the areas of small holdings and the total production from them have no engineering significance.

Artificial Recovery

407. The method of pumping water or gas into one well, with the purpose of increasing the pressure head on oil at an adjoining well, is not applicable in fields of this control. Nature is successfully flooding the producing sand with water, and it is useless for us to attempt to help her in the task. So far as any efforts on our part are concerned, the static pressure of the reservoir will not be affected, should we use either water or gas. The reason for this is simple to explain with Figure 228. The type reservoir (Article 242) may have its static pressure increased without difficulty, but who would attempt to increase that of the natural reservoir?

Storage Wells

408. A well in an abandoned field of this control may be used safely for the storage of gas, provided certain conditions are fulfilled; namely,

(a) That the well used for the purpose is located on the crest of the domal structure, such as the south well at No. 1, Figure 395.

(b) That the quantity of gas stored does not require space exceeding that within the closed contours.

(c) That the interested party has jurisdiction over all the property covered by the area of storage.

It does not seem possible that the storage of oil in abandoned fields can ever be made practicable. The danger of having trouble with edge water is sufficient to discourage the attempt. We have seen that there is little such danger with gas.

Naval Reserves

409. What value has the quarter-section A in Figure 395 as a reserve for future development? It is evident that there will some day be no oil underlying it, if wells higher on the structure are allowed to produce.

The situation is slightly different if the reserve were located directly on the crest of the structure. The wells down the dip will not drain the reserve, but, if the reserve is not developed simultaneously with the remainder of the field, these lower wells will restrict the area of the pool for the reserve to the contour of their location. Only by simultaneous development has the reserve an equal opportunity with other wells for long-range drainage. Long-range drainage means a large cumulative production from the wells.

Reserves are impossible, as such, in reservoirs of this control, unless they are sufficiently large to cover the entire pool. If they do not cover the pool, they must be developed along with the other properties; in such a case they can hardly be considered as "reserves".

Size of Orifice

410. Under given conditions within the reservoir, the rate of production from an individual well depends upon the external friction and the constant back pressure against production. Let us assume that the static pressure is unaltered, and that the constant back pressure is established at a low value and that it is maintained unaltered. We may now discuss particular features of external friction which, in reality, fall under Case 1, Article 291.

In Article 64 the mathematical orifice was defined as that hollow space at the bottom of the well, large or small, together with the hole, or holes, of entrance into the casing. In Article 68 it was stated that the orifice itself, and all the flow line exterior to it, offer resistance to the production of fluid from the reservoir. Aside from the influence of well equipment at the surface, external friction depends upon the size of the hollow space, the size of the opening or openings into the casing, and the size of the casing.

Of first importance is the size of the hollow space. In Article 367 attention was drawn to the possibilities of an ernormous expansion of gas within a few feet of the bottom of the well. Space which is occupied by grains of sand can-

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As its final provision for the continuous performance of every Red Seal power plant, Continental follows the motor out into the field where it is to operate and through a complete chain of parts depots makes it possible to supply genuine replacement parts in every section of the United States.

Even in remote localities there need not be a delay of more than *eight hours* when a replacement part is needed. Naturally such service facilities emphasize the value of Red Seal Motors as industrial equipment where continuous performance and economical maintenance are of prime importance.

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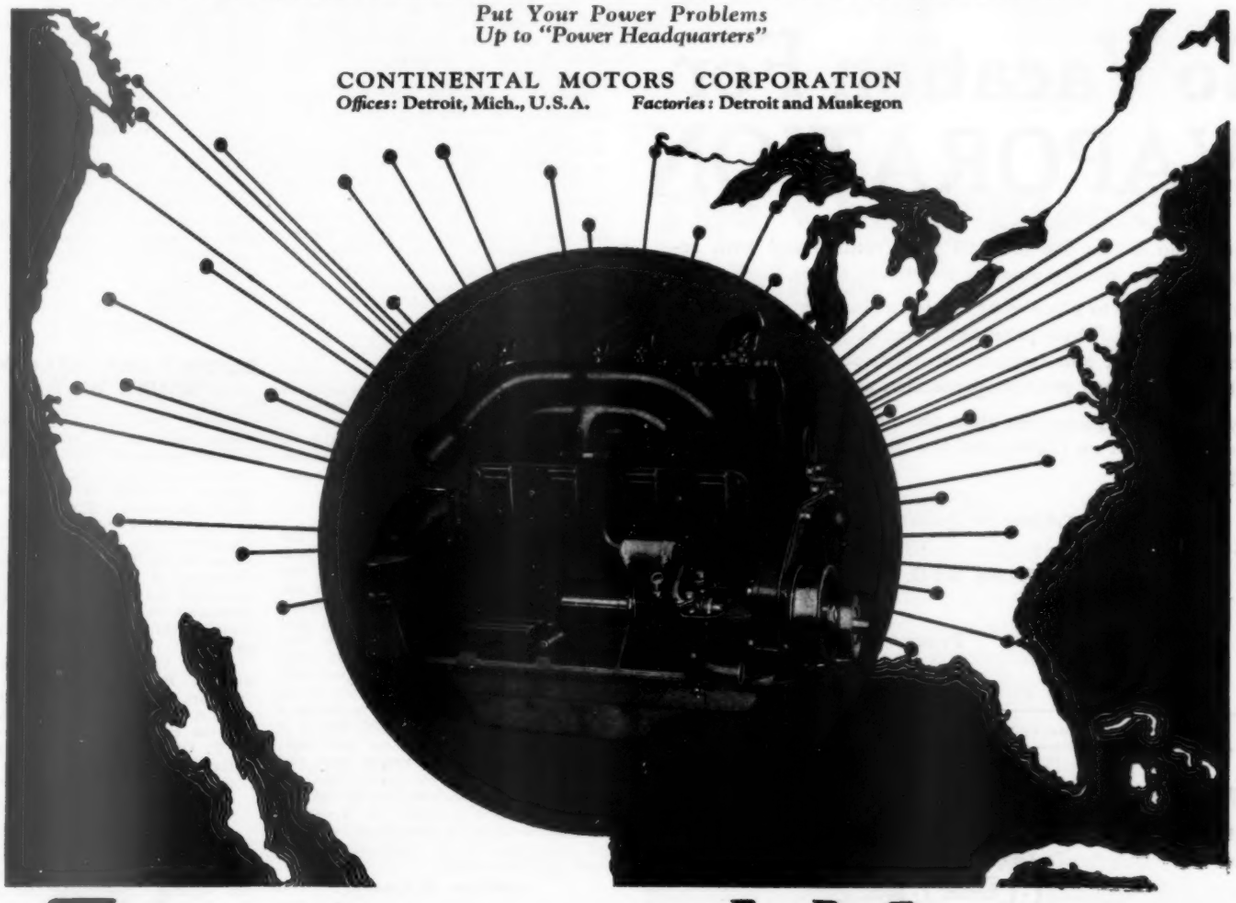

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Why accept anything less than the best bolted steel tank when the cost is no higher and the ultimate saving beyond comparison?

"Alone in Quality"

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We now furnish "Buck" type vacuum-pressure valves and vacuum breakers

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not be occupied by gas. If we remove the sand, we give more space for the gas at a point where it is particularly needed. There is also a geometric feature which seems even more important for liquids than for gas. This is the diminishing circumferential area accompanying radial flow. As the fluid approaches the orifice, the cylindrical surface representing the cross-section of flow diminishes with the radius. We can appreciably decrease the enormous lineal velocities within a few feet of the casing by removing the sand, and so give the fluid a greater net cross-section of flow.

Nature attempts to enlarge this chamber as production takes place, but she is not always successful. The formation is sometimes competent to withstand her efforts, and refuses to break down. A shot of nitroglycerine will often aid her.

411. Of second importance is the size of the entrance into the casing. The total area of perforations must be considerably larger than the cross-section of the casing, if friction is to be minimized at this point.

The size of the casing is of third importance. For a given size of chamber, in a given reservoir, there is a definite size of casing which suffices to carry the fluid. Larger sizes will not appreciably increase the rate of production. Presumably the chambers in a given formation attain a maximum size which is more or less consistent throughout the field; so the same size casing will generally suit all wells in the field. Frequently we need not regret that depth and water strata prohibit our landing a larger casing at the producing horizon.

Two wells with the same size casing produce at a more rapid rate than one with a casing of double area, because of the chambers which the two have. The success of the multiple orifice is due to the success of the multiple chamber. But the group of closely drilled wells, taken as a unit orifice, has radial flow on a larger scale, and the impossibility of having a chamber on the same scale makes the unlimited increase in the number of wells constituting the group inadvisable. That which is true for the individual well is also true for the group of wells. There is a difference in the matter of scale only.

In addition to the subject of subordinate structural and textural features, the problem of well spacing also involves the subject of the multiple chamber.

All this is a special interpretation of the significance attached to the minimum value of the exponent zeta in the equation of the pressure gradient.

Reservoirs in Series

412. We have discussed only the single reservoir encountered by the drill tools. Frequently there are several reservoirs in the same field, one below another. Each has a separate reservoir by itself; or, at least it must be considered so until it can be proven that it is not separate. It is common practice to deepen a well to a distinct reservoir, and record production as of the same well. It is true that it is the same hole at the top of the ground, but it is a different well. Again we may say: Turn the page in the record book and start a new curve on production. In this manner we eliminate one of the factors which have disturbed us in our attempts to apply mathematical methods of calculation to the production of oil and gas from wells.

Oscillation of Control

413. As stated in Article 87, reservoirs may alter in their control during the course of production.

If the supply of water for the reservoirs of Figures 242 and 277 is insufficient to keep pace with the production from the orifice, the pressure head on the orifice declines. If the supply of gas in the gas holder type of reservoir of Figure 241 is insufficient to prevent the floating bell from resting on the bottom, the presure head at the orifice declines.

When the failure of the fluid is only temporary, we shall say that oscillation is temporary. Permanent oscillation may occur under several conditions; to-wit,

(a) The supply of fluid is completely shut off.

(b) The supply is reduced to a constant low value, or to a uniform average low value.

(c) The original rate of supply is unaffected, but the rate of total production is abnormally increased. In this case we shall suppose that the original rate of supply is constant, or it has a uniform average value amounting to its former rate.

We now have volumetric control. According to Article and Figue 236, the potential pressure curve is a parabola, and the potential velocity curve is a straight line. If suitably plotted on the same sheet of paper, the velocity-time curve lies above the pressure-time curve.

Drilling Has Ceased In Deepest Gas Well At Mile and a Half

LATROBE, Pa., Aug. 2.—After three years of almost constant drilling, the deepest producing gas well in the world, located at Longbridge, near here, and owned by the Peoples Natural Gas Co., will be drilled no farther. The well has been drilled to a depth of 7,756 feet and operations have been brought to a halt.

A sign has been placed on the rigging proclaiming it as deepest well in the world with a depth of nearly 1½ miles. The well is on the Lincoln highway and thousands of persons have stopped their automobiles and viewed the well. The rig will be torn down.

A steady flow of gas is still issuing from the well and the filtration process to free it from the ill smelling hydrogen sulphide is still a necessity. It could not be learned how much gas the well is producing at present. The drilling of the well began May 23, 1922. The first casing put into the well was 60 feet long and 13 inches in diameter. The next was 1,100 feet long and 10 inches in diameter while the third casing was 3,900 feet long and measured 8 inches in diameter. The fourth casing was 6,200 feet long and 5¾ inches in diameter, while the last string of casing was 6,794 feet long and 4 inches in diameter.

SURVEY FOR HELIUM UNDER WAY IN TEXAS

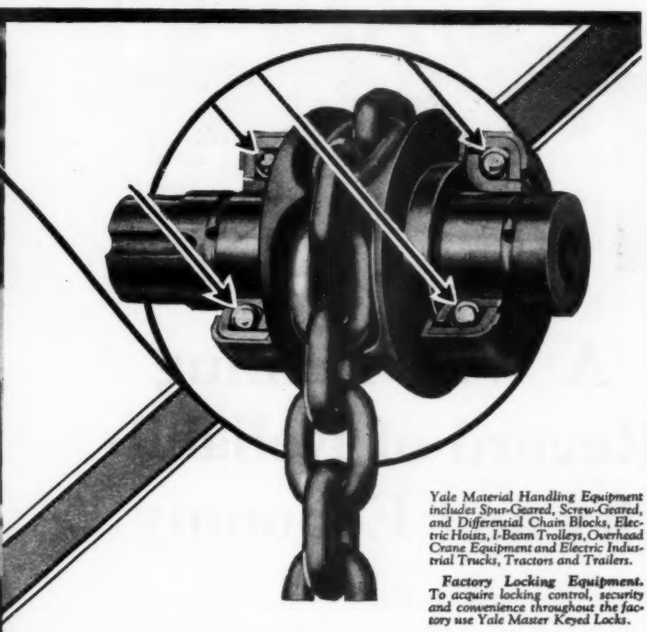
FORT WORTH, Tex., Aug. 2.—Faced with a diminishing supply of helium producing natural gas which caused a decrease in the amount of helium extracted at the Fort Worth plant this month. The Bureau of Mines of the United States Department of Commerce has ordered an immediate survey of the Texas natural gas fields to determine if possible, what the future holds for the production of the non-inflammable buoyant gas used to inflate the Naval airships Shenandoah and Los Angeles.

R. A. Cattell, chief of the helium division, Bureau of Mines, has arrived in Fort Worth from Washington to conduct the survey. He is making plans for the probe with the cooperation of C. F. Cook, engineer in charge of the helium plant.

CHARTER CHANGES

OKLAHOMA CITY, Okla., Aug. 2.—The Amerada Refining Corp. of Delaware has given notice of an increase in its capital investment in Oklahoma from $300,000 to $800,000. An increase from $22,535 to $40,000 has been made in the capital investment here of the Murphy Oil Co. of Pennsylvania. The Harrivo Oil & Gas Co. of Oklahoma City has decreased its capital stock from $50,000 to $35,000. Charters were issued by the Secretary of State recently to the Far Go Oil & Gas Co. of Oklahoma City, capital stock $50,000, incorporators, T. H. Milby, W. B. Green and H. L. Wallis, all of Oklahoma City, and the Swoveland Drilling Co. of Tulsa, capital stock $25,000, incorporators V. W. Swoveland, A. C. Wimmer and J. B. Batlett, all of Tulsa.

TRADE YALE MARK



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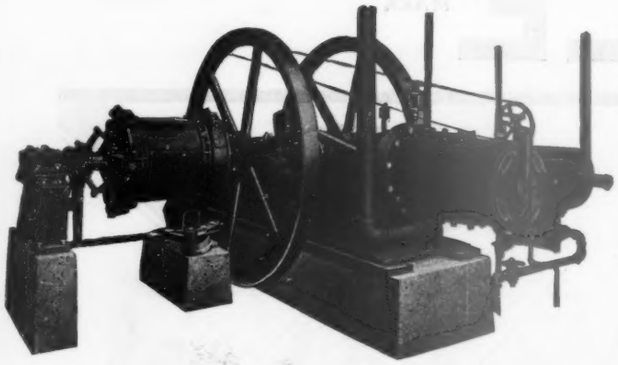

A Well Drilling Record of Reliability and Economy

A contractor in the Bradford, Pennsylvania, field, drilling with two 30 HP Reid Gas Drilling Engines has given us the following report.

He purchased his first Reid Gas Drilling Engine in November, 1922, and has drilled 11 wells with it. His second engine was purchased in September, 1923, and has drilled five wells. The depths of these wells ran from 1400 to 1600 feet, *and on none of them was the drilling time over 11½ days.*

Fuel costs were only kept on two wells and were $17.00 and $15.30 respectively, gas costing 30c M. The average daily consumption of gas was approximately 4,500 cubic feet.

Time and fuel saving were not the only economies, however. In the drilling of these 16 wells, the total expense for repair parts was but *ninety cents* and the engines are good for many more wells.

An engine which can drill not only one but several 1400 to 1600-foot wells in 11½ days time for each, with a fuel cost of about $17.00 per well and a total expense for repair parts of but ninety cents and this on two engines and sixteen wells, *is reliable, durable and economical.*

Let us tell you some of our other records. We will gladly furnish them at your request.

Ask for Bulletin No. 28—"Drilling Wells with Reid Gas and Oil Engines."

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BRANCH SHOP—TULSA, OKLAHOMA

GULF PORT SHIPMENTS OF OIL SHOW SMALL INCREASE DURING JUNE

HOUSTON, Tex., Aug. 2.—The total amount of refinery products and crude oil shipped from the Gulf ports during the month of June aggregates 16,058,734 bbls., an increase of 17,578 bbls. from the May figures. The movement of refinery products, the comparison shows, fell off 511,667 bbls. and of crude increased 529,245 bbls.

The gross export shipments increased 156,189 bbls. The foreign consignment of refined increased 374,338 bbls. and crude declined 218,149 bbls. in comparison with May.

The Humble Oil & Refining Co. leads the list with a total of 4,238,165 bbls. refined and crude combined. The company loaded out 1,455,403 bbls. of refinery products from its Baytown refinery and 2,782,762 bbls. of crude from its various terminals. The Standard Oil Co. of Louisiana is next in line with a total of 4,085,913 bbls., consisting of 2,888,806 bbls. of refinery products from its Baton Rouge refinery and New Orleans storage. Its crude consignments total 1,197,107 bbls. The Gulf Refining Co. is third with 2,143,811 bbls., of which 2,038,311 bbls. were refinery products and 105,500 bbls. crude. The Texas Co. loaded out a total of 1,497,651 bbls. from its Port Arthur terminals, made up of 1,186,544 bbls. of refined and 311,107 bbls. of crude. The Atlantic Oil Producing Co. (Atlantic Refining Co.) moved 672,770 bbls. of crude from Port Arthur, Atreco, Smith's Bluff and Pasadena on the Houston ship channel. The gross of the Magnolia Petroleum Co. was 952,987 bbls. and of the Pure Oil Co. 838,358 bbls. The Sinclair Co. sent out a total of 705,010 bbls. of refined and crude.

The following table gives the shipments in detail:

From Port Arthur
By The Texas Co.
Refined

Destination—	Bbls.
Coastwise	981,154
Export	268,390
Total	1,186,544

Crude

Coastwise	292,226
Export	18,881
Total	311,107

From Port Arthur
By Gulf Refining Co.
Refined

Coastwise	1,954,839
Export	83,472
Total	2,038,311

Crude

Coastwise	105,500

From Beaumont
By Magnolia Petroleum Co.
Refined

Coastwise	*907,099

Company makes no distinction between coastwise and export shipments.

Crude

Coastwise	45,888

From Smith's Bluff
By Pure Oil Pipe Line Co.
Refined

Coastwise	170,671

Crude

Coastwise	667,687

From Sabine
By the Sun Co.
Crude

Coastwise	649,037

From Port Arthur
By Atlantic Oil Producing Co.
Crude

Coastwise	286,156

From Atreco
By Atlantic Oil Producing Co.
Crude

Coastwise	57,143

From Smith's Bluff
By Atlantic Oil Producing Co.
Crude

Coastwise	108,209

From Neches Terminal (Orange)
By Humble Oil & Refining Co.
Crude

Coastwise	181,300

From Texas City
By Humble Oil & Refining Co.
Crude

Coastwise	1,806,161

From Texas City
By Vacuum Oil Co.
Crude

Coastwise	146,687

From Texas City
By Marland Oil Co.
Refined

Export	121,110

Crude

Coastwise	672,388
Export	174,085
Total	846,473

From Baytown
By Humble Oil & Refining Co.
Refined

Coastwise	814,470
Export	640,933
Total	1,455,403

Crude

Coastwise	795,301

From Houston (Pasadena)
By Crown Central Petroleum Corp.
Crude

Coastwise	*335,549

*148,680 bbls. account of Atlantic Ref. Co.
76,548 bbls. account of Big Lake Oil Co.
110,321 bbls. account of Beacon Oil Co., Boston.
Luling, Burbank, Cotton Valley, Powell. crude.

From Houston (Pasadena)
By Atlantic Oil Producing Co.
Crude

Coastwise	72,582

From Houston (Since)
By Sinclair Refining Co.
Refined

Coastwise	219,212
Export	46,529
Total	265,741

Crude

Coastwise	439,269

From Houston (Galena)
By Galena-Signal Oil Co. of Texas
Refined

Coastwise	56,000
Export	45,000
Total	101,000

From Houston
By Deepwater Refineries
Refined

Coastwise	70,000

From Baton Rouge (Refinery)
By Standard Oil Co. of Louisiana
Refined

Coastwise	790,872
Export	659,881
Total	1,450,753

Crude

Coastwise	797,623
Export	399,484
Total	1,197,107

From New Orleans (Storage)
By Standard Oil of Louisiana
Refined

Export	240,946

SUMMARY

Vessel Shipments From Gulf Ports of Refined and Crude During Month of June, 1925

Company and Port—	Refined	Crude	Total
The Texas Co., Port Arthur	1,186,544	311,107	1,497,651
Gulf Refining Co., Port Arthur	2,038,311	105,500	2,143,811
Magnolia Petroleum Co., Beaumont	907,099	45,888	952,987
Pure Oil Pipe Line Co., Smith's Bluff	170,671	667,687	838,358
The Sun Co., Sabine	.....	649,037	649,037
Atlantic Oil Producing Co., Port Arthur	.....	286,156	286,156
Atlantic Oil Producing Co., Atreco	.....	57,143	57,143
Atlantic Oil Producing Co., Smith's Bluff	.....	108,209	108,209
Humble Oil & Refining Co., Neches Terminal	.....	181,300	181,300
Humble Oil & Refining Co., Texas City	.....	1,806,161	1,806,161
Vacuum Oil Co., Texas City	.....	146,687	146,687
Marland Oil Co., Texas City	121,110	846,473	967,583
Humble Oil & Refining Co., Baytown	1,455,403	795,301	2,250,704
Crown Central Petroleum Co., Houston	.....	335,549	335,549
Atlantic Oil Production Co., Houston	.....	72,582	72,582
Sinclair Refining Co., Houston	265,741	439,269	705,010
Galena-Signal Oil Co., Houston	101,000	.....	101,000
Deepwater Refining Co., Houston	70,000	.....	70,000
Standard of Louisiana, Baton Rouge	1,450,753	1,197,107	2,647,860
Standard of Louisiana, New Orleans	240,946	.....	240,946
Total June	8,007,578	8,051,156	16,058,734
Total May	8,519,246	7,521,911	16,041,156
Difference	511,667	529,245	17,578
Exports			
The Texas Co., Port Arthur	268,390	18,881	287,271
Gulf Refining Co., Port Arthur	83,472	.....	83,472
Marland Oil Co., Texas City	121,110	174,085	295,195
Humble Oil & Refining Co., Baytown	640,933	.....	640,933
Sinclair Refining Co., Houston	46,529	.....	46,529
Galena-Signal Oil Co., Houston	45,000	.....	45,000
Standard of Louisiana, Baton Rouge	659,881	399,484	1,059,365
Standard of Louisiana, New Orleans	240,946	.....	240,946
Total June	2,106,261	592,450	2,698,711
Total May	1,731,923	810,599	2,542,522
Difference	374,338	218,149	156,189

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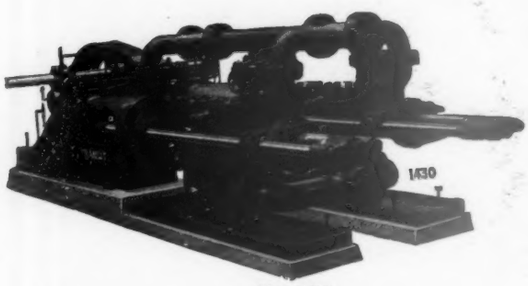

Fig. 1430

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PRODUCTION OF TUBULAR GOODS NOW AT GREATER RATE THAN RECORD YEAR

By B. E. V. Luty

PITTSBURGH, Pa., Aug. 3.—There has been a further increase in buying of oil country tubular goods, and business in that line is very brisk. Business began to pick up early in May, when it had not been particularly light at that, and has been increasing almost constantly since then. A few weeks ago some mills found themselves booked ahead for three or four weeks on certain sizes, which in a sense, made them behind in deliveries.

Since then all the mills have become still better booked, and a crucial test of the situation was furnished when the Empire Gas & Fuel Co. came to place orders for 60 miles of 12¾-inch line pipe, quick delivery being required. Only one or two mills were found which were able to begin deliveries as soon as desired, and the order was split into 25 miles to an independent mill and the balance to the leading interest, the delivery of the first mentioned lot to begin at once. Some mills were so well filled that they could not even figure on the later deliveries of the order, which at that amounts to only 5,000 or 6,000 tons.

It was not that the mills were so well filled with line pipe business but that they were well filled on casing and other large sizes. As a mater of fact, while there has been a fair amount of line pipe business this year there has been nothing unusual and just now the production of line pipe is, if anything, rather light.

Little Line Pipe

When with relatively little line pipe business the pipe mills are running practically all lap weld furnaces full and some are so crowded they cannot accept prompt delivery business, an interesting point is brought out. The heaviest production by pipe mills was in 1923, when there was almost full operation throughout the year. In that year there was a very large amount of line pipe business. The production of all oil country tubular goods in that year was 1,358,889 gross tons, and it was estimated at the time that fully 400,000 tons of this was line pipe. Now the mills are producing oil country goods at substantially as high a rate as in 1923, but with relatively little line pipe. It follows that the present production of tubular goods going to wells, in casing, etc., is at a greater rate than in the record year. The pipe mills seem to expect this demand to keep up right to the end of the season.

The pipe mills do not consider the demand for merchant pipe good. With a 100 per cent operation at lap weld furnaces there is only about a 75 per cent operation at butt weld furnaces, where nearly all the merchant pipe is made. Yet stocks in the hands of jobbers are very light indeed, being estimated in one quarter at 25 per cent of normal or average, hence the jobbers must be buying from mills at the rate at which they are distributing pipe. The average operation of the pipe industry as a whole is between 85 and 90 per cent.

The steel situation as whole shows no particular change in the week. There is much talk of improved tone, or better sentiment, but if this talk is not followed by heavier buying it is likely to lead to disappointment. Possibly the steel market may be regarded as having been in a safer position in May and June. Then prices were softening a trifle and mill operations were going down, but greater losses had been expected than were being found, and so the common remark was that business was worse but not as much worse as had been expected, so the whole trade felt very cheerful about it.

No Change in Steel Operations

During July there was practically no change in the rate of steel mill operations, which held at about 65 per cent, against 71 per cent for June and 83 per cent for the half year. Steel buying, on the whole, was in about the same volume in the three months, May, June and July. The decrease in operations was due to playing out of old orders, the buying representing in the neighborhood of 50 per cent of capacity.

There has been no distinct change in steel prices. Sheets have firmed up a trifle more. The only definite changes in more than a month have been those reported a week ago, $1 a ton decline in plates and $2 in shapes. Pipe mill products are firm, as they have been right along.

SMACKOVER PIPE LINE FINISHED IN 67 DAYS

Late in April, an announcement was made that Standard Pipe Line Co., Inc., would construct a pipe line from the Smackover Field to Grand Lake, Ark. That line is complete and was placed in operation July 25, 1925, or 67 days from the time first material was received.

The pipe line is constructed of 10-inch steel line pipe and has an aggregate length of 95 miles. Between Smackover and Grand Lake there are six intermediate pumping stations which will enable the pipe line to deliver approximately 24,000 bbls. each day, which is the equivalent of 1,000 bbls. per hour. These stations are equipped with heating facilities for heating the low gravity crude which requires heating in cold weather. Upon receipt of the crude oil at Grand Lake, it will be delivered into barges belonging to Standard Oil Co. of Louisiana for transportation to North Baton Rouge, La., where that company operates a large and modern refinery. That refinery is one of the largest in the world and is situated at the head of deep water navigation, thus enabling Baton Rouge Refinery to ship its products to all ports of the world. The largest tank steamers afloat that can enter the month of the Mississippi River, can safely navigate the 250 miles to North Baton Rouge at all seasons of the year and it all stages of the river.

The Standard Oil Co. of Louisiana will operate a fleet of river steamers and barges for the purpose of transporting crude oil from Grand Lake, Ark., to North Baton Rouge and it is understood that the company will also use ocean-going tank steamers for such transportation during approximately four months of the year when the channel of the Mississippi River is sufficiently deep to permit the operation of the tank steamers between the Arkansas terminus of the pipe line and North Baton Rouge.

The pumping stations between Smackover and Grand Lake are located at the following points in Arkansas: Ritchie, Strong, Felsenthal, Crossett, Parkdale, and Wilmot. Each of these stations will be manned by a force of engineers and pumpmen so that the pipe line can be continuously operated throughout 24 hours of each day.

The construction of the pipe line was handled under the direct supervision of Mr. F. Ray McCrew, vice president and manager of the Standard Pipe Line Co., Inc., with headquarters in Shreveport, La., and the operation of this line will be under the direct supervision of Mr. S. W. Day, superintendent, whose headquarters are also in Shreveport.

The river loading terminal and pumping station at Grand Lake, Ark., together with the barge line to Baton Rouge, will be operated under the supervision of Mr. C. I. Fiero, vice president and manager of Baton Rouge refinery, Standard Oil Co. of Louisiana. That company is a large producer and purchaser of crude oil in both the Louisiana and Arkansas fields and will use the pipe line and the river facilities in delivering Smackover crude oil to its refinery at North Baton Rouge, La.

J. C. HELM KILLED

COLORADO SPRINGS, Colo., Aug. 2.—J. C. Helm, 65, of Warren, Pa., was killed and six other persons were injured when the car overturned on the Pass west of Colorado Springs on the Pikes Peak Ocean-to-Ocean Highway. He was owner of several oil leases near Tiona, Pa.

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GASOLINE GAINS LEAD IN EXPORT AS WELL AS DOMESTIC BUSINESS

By N. O. Fanning

NEW YORK, Aug. 2.—The oil export market at New York during the first half of 1925 represented two phases. In January and February the market was strong and the movement of refined products into export channels unusually heavy. During the four months following exports slumped and inquiries fell off sharply. This decline was attributed (1) to unusually large stocks of oil at foreign distributing points because of heavy receipts during the six months preceding February, and (2) to expectations of price declines on the part of foreign independent buyers.

It is generally recognized in the oil export trade that nothing discourages foreign buying so much as the possibility of a drop in the price structure. Foreign buyers are unusually keen in anticipating the future market in the United States and at the first indication of a break in prices, even though slight, they are inclined to hold off. On the other hand, at signs of advancing prices, they are just as eager to buy, and it can be said the recent advance in Mid-Continent crude oil prices brought out some important inquiries from English, French and German distributors.

In addition, the continued unsettlement industrially and politically in foreign countries, including especially Europe, northern Africa and China has discouraged business somewhat. Nevertheless, shipments of kerosene to China do not seem to be adversely affected.

May Miscalculate Market

Domestic opinion regarding the oil export outlook for the remainder of the year is optimistic. Some New York interests closely connected with the export trade believe for once those abroad have miscalculated, and that the hand to mouth buying of the past few months had not only put the foreign oil situation into a more favorable position through reduction in stocks, but having failed to bring substantial reductions in prices in America, will be followed by a rush to buy.

They point out that the price tendency in the United States now is upward. If any sharp downward trend in export prices were to develop it would naturally be checked for this reason. With no ground for expecting a decline in price levels, they believe the foreign oil distributors will have seen their mistake.

Price Trend Mixed

During the first six months of 1925 the price movement of oil products for export at this port was irregular. Prices on the average advanced from January 1 to about the middle of February, declined slightly until May, when the upward movement was resumed.

The following table shows the price trend of gasoline and kerosene for export at New York. It contains dates of changes and prices during the first six months of 1925, and the existing prices on July 1 and January 1 of each year since 1920 (figures in cents per gallon):

	Gasoline (U. S. Navy)		Kerosene (Standard White)		
1925—	Cases	Bulk	Bulk	Bbls.	Cases
Present ..	30.65	16.50	6.00	13.00	16.40
July 1 ...	30.65	16.50	6.00	13.00	16.40
May 26 ..	30.65	16.50	.....	.....	.....
May 21 ..	.....	.....	6.00	13.00	16.40
May 13 ..	29.65	15.50	.....	.....	.....
Mar. 19 .	29.15	15.00	.....	.....	.....
Feb. 14 ..	30.15	15.00	.....	.....	.....
Feb. 2 ...	29.15	15.00	.....	.....	.....
Jan. 26 ..	28.15	14.00	.....	.....	.....
Jan. 24 ..	27.65	13.50	.....	.....	.....
Jan. 1 ...	26.65	12.50	6.50	13.50	16.90
1924—					
July 1 ..	28.15	14.00	6.50	13.50	16.90
Jan. 1 ...	24.40	10.50	7.00	14.00	17.15
1923—					
July 1 ..	28.65	15.00	6.00	13.00	15.90
Jan. 1 ...	28.75	15.50	7.00	13.25	16.50
1922—					
July 1 ..	33.25	20.00	6.00	12.00	15.50
Jan. 1 ...	33.25	19.00	8.00	15.00	18.50
1921—					
July 1 ..	32.75	17.00	6.00	15.00	18.00
Jan. 1 ...	40.75	24.00	13.50	24.50	26.50
1920—					
July 1 ..	40.25	24.00	13.50	23.50	26.00
Jan. 1 ...	34.00	.....	12.00	19.75	23.75

Gasoline Prices

Gasoline prices have ranged this year between 26.65 and 30.65 cents per gallon in cases at New York, while bulk gasoline ranged between 12.50 and 16.50 cents. Prices are now at their highest levels for this year.

It will be noticed that prices of gasoline are higher generally this year so far than in all of 1924 or 1923, but are below those which existed in 1922, 1921 and 1920. At the beginning of 1921 prices were at their peak, gasoline in bulk, cargo lots, standing at 24 cents per gallon. The present price is 16½ cents. The lowest level of prices was reached in 1923, when the price of bulk gasoline fell to 10.50 cents per gallon, closing that year at the same price.

Current prices for gasoline for export at New York seem to be about half way between the peak prices of 1920 to 1922, and the low prices of 1923 and the beginning of 1924.

Kerosene Slumps

The course of kerosene export prices has been very different from that of gasoline or any other important petroleum product. Kerosene prices, which were at the peak in 1920 and the beginning of 1921, dropped off in 1921 more than 50 per cent and have never regained the lost ground. The lowest prices in 1921 are those which exist at the present. This is interesting when it is remembered kerosene was originally the most important product in both the export and domestic petroleum trade.

The decline in the general level of kerosene prices must necessarily put kerosene on a much lower scale of importance than formerly from the point of view of the oil export trade. Gasoline, which had formerly captured the leading place in the domestic oil business, has now gained ascendency in exports as well.

Lubricating Oils

The lubricating oil export market here has remained on an even keel during the first half of 1925, with price changes narrow. A heavy export movement during January and February was succeeded by a falling off and the current movement is still below normal.

The same thing applies to wax exports. Heavy shipments to Italy, Spain and other European countries early in the year have been followed by a sharp drop in exports to these countries. This has partly been offset, however, by increased exports to the Orient.

SOLAR REFINING CO. ANNOUNCES CHANGES

LIMA, Ohio, Aug. 2.—J. R. Cuthbert, formerly assistant to the president, has been elected a member of the board of directors of the Solar Refining Co. to succeed F. G. Borges, who resigned as vice president and director after being with the company 34 years.

Other changes announced by the Solar Co. was the relief to N. D. Keys, vice president and treasurer, of the duties of the latter office and the appointment of E. L. Hughes as treasurer. Officers of the company now are: F. T. Cuthbert, president and general manager; N. D. Keys, vice president and assistant manager; H. A. Graham, secretary, and E. L. Hughes, treasurer. Directors of the company are: F. T. Cuthbert, N. D. Keys, J. W. McCarty, J. R. Cuthbert and H. O. Bentley.

REORGANIZED COMPANY TO EXTEND OPERATIONS

HOUSTON, Tex., Aug. 2.—The Thrift Corp., of Houston, which specializes in the manufacture and operation of hydraulic casing-pulling machines and the plugging of abandoned holes in accordance with the regulations of oil and gas commissions, has reorganized with the following new directors: W. P. Stiles and Y. P. Fawcett, of Shreveport, La.; Charles H. Lane and A. L. Vollmer, Houston; B. L. Walkup, Mexia. Mr. Lane has been elected president and Mr. Vollmer vice president and general manager. The company has its casing pulling machines in all the Southwest fields and is planning to extend its operations into Mexico.

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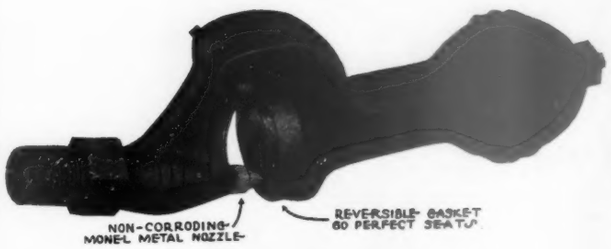

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OVER-REFINING SAID TO THREATEN GASOLINE MARKET IF NOT CURTAILED

By L. M. Fanning

Possible advocacy of curtailment of runs by refiners is heard as a result of apparent causes behind the present weakness in the Mid-Continent refinery gasoline market. That the industry has been over-refining for the last two mnnths and that it is probably over-refining at the present time is indicated by the latest available statistics.

During the month of May U. S. refineries established a new high record in their operations, daily average runs being 2,012,000 bbls. of domestic and foreign crude oil. This compares with 1,770,000 bbls in May, 1924. Daily average runs for the first five months of this year follow:

Daily average crude runs by United States refineries, 1925:

	Barrels
January	1,849,000
February	1,893.000
March	1,916,000
April	1,973,000
May	2,012.000

The daily average for the five months was 1,929,000 bbls., compared with 1,720,000 bbls. daily run during the same five months of 1924. Daily runs for the full year of 1924 averaged 1,763,000 bbls.

The necessity of increasing runs this year was apparently due to anticipated increases in gasoline demand and, as the early months rolled by, due to actual consumption of gasoline at a rate well above expectations. Another element that could be considered a factor in the larger runs is that of the quality of the crude. Light oil production has been falling off, and unless refineries are drawing on light oil held in storage it is reasonable to assume that more present day crude must be run to get the required quantity of gasoline. Offsetting this is the increase in cracking operations, which is making the crude go a longer way.

The evidence of over-refining lies mainly in the fact that anticipated drafts on gasoline stocks have failed to materialize. Gasoline consumption continues at a substantial increase over last year. Government figures for the first five months of this year show an increase in total consumption, domestic and exports, of well over 25 per cent, but in the month of May production and imports more than took care of the current consumption. This was represented by a slight increase in stocks. Production and consumption were virtually in a balance.

Preliminary figures for June just issued by the American Petroleum Institute and which cover 65 per cent of the operating refining capacity, now indicate that during that month production and imports again offset consumption, gasoline stocks being slightly increased. Ordinarily the seasonal draft on stocks begins in May and is sustained through the summer and early fall. Last year it did not begin until June. The fact that stocks were drawn on in April of this year, makes the indicated additions in May and June the more striking. The explanation lies in the greatly increased operations and gasoline output of the refineries.

The rate of increase in gasoline consumption of the early months this year is not expected to be maintained during the present summer peak. One probable explanation of the gain thus far shown is that as against an unprecedentedly bad spell of weather last year, the weather early this year throughout the country was unprecentededly favorable for automobile use. The consumption during the peak season last year on the other hand was very large and brought up the average increase for the year.

A comparatively small gain during the peak season this year is all that can reasonably be expected, although on this point some of the conservative analysists may be badly fooled. That consumption may be heavier than anticipated by these. is possible, according to others, in view of the record rate of automobile production and sales during June, indicating total production of over 4,000,000 cars this year. Automobile registration at the end of this year will probably exceed 19,000,000 cars, against 17,500,000 cars last year. Favorable weather may do the rest.

However, judging from the figures available on operations in May and June and the present gasoline market situation, the refining industry would do well to put on the brakes until the extent of the summer demand is more fully determined. It is learned that some of the large refining companies are making unusual efforts to stop further accumulation in gasoline stocks. It is apparent, however, that if over-refining is actually occurring, a curtailment sooner or later will be forced, but in that eventuality it will be preceded by a break in gasoline prices and serious disturbance to a situation that in almost every other respect is encouraging.

Conservative estimates place the increase in gasoline consumption this year over last at from 15 per cent to 17 per cent. This includes domestic demand and exports. Estimates as to the extent to which the industry is over-refining at the present time range from 70,000 bbls. to 125,000 bbls. of crude oil a day.

California is a big factor in the present gasoline situation. While in 1923 and part of 1924 California affected the Mid-Continent market through shipments of crude, it is now affecting the Mid-Continent through shipping East from its accumulated gasoline. It is estimated that shipments of California gasoline to the eastern seaboard at the present time are averaging around 40,000 bbls daily and probably 45,000 bbls. including tops.

Under contracts now existing it is believed the movement will increase to 70,000 bbls. a day or thereabouts. The Los Angeles f. o. b. refinery price for gasoline is around 11 cents at present, but much of the California gasoline now moving is understood to have been contracted for at around 9 1-2 cents. This price, and even slightly lower prices which are reported, cannot be confirmed, but if it is correct, and figuring 2 cents a gallon as the cost of shipping the gasoline to New York, California gasoline is getting into the East at 11 1-2 cents or lower, which compares with the present Mid-Continent refinery price of around 12 1-2 cents.

The effect of this large movement of California gasoline so far as the Mid-Continent is concerned is to restrict the disposition of the product of the latter district. That is, the question is, can the Middle West territory take care of Mid-Continent production. California is overstocked with gasoline and it is estimated that it is over-refining to the extent of 20,000 bbls. a day. California is getting relief from the East but if there is any backing up of gasoline in the Mid-Continent, relief for the latter so far as the ability of the East to offer it is concerned, seems to be precluded because of the price differential in favor of California. Moreover, the question arises as to the ability of the East to absorb its present commitments.

The interrelation of the gasoline markets is clearly shown in the present situation, conditions in one geographical district affecting those in others virtually directly. For this reason, if the industry is over-refining steps to remedy the condition should be taken by the entire industry. As the Mid-Continent is particularly affected immediate curtailment there would appear to be a wise course.

WILLIAM SHAFFER DEAD

FRANKLIN, Pa., Aug. 2.—William Shaffer, aged 85, a prominent oil man, is dead after several months illness. His oil operations, at first discouraging, grew to be among the most important in this region.

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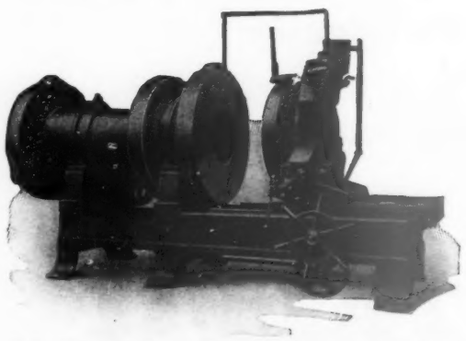

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MEXICAN PRODUCTION DECREASES CRUDE IMPORTED FROM SMACKOVER

By George Blardone

Production of petroleum in Mexico during the first half of 1925 can be placed at 65,797,583 bbls. This represents a decrease of say 8,264,210 bbls. when compared with the same period in 1924. Of the volume produced in the first six months of the current year 44,421,499 bbls. represents the heavier oils of the northern fields and 21,376,084 bbls. of the lighter oils of the southern fields. In the same period the vessel movements from ports of primary clearance totaled 60,947,190 bbls., a small fraction of which was consumed by the domestic trade being cleared for ports south of this the producing district.

In the subjoined table of production by months the curve will be seen to have reached its apex in the month of March, showing the greatest fall in June, the last month of the period under discussion. Vessel clearances, when considered by months, did the same in June the volume so dispatched going slightly under the 9,000,000 mark, (8,910,852 bbls.)

In addition to the crude produced in the republic, some 947,403 bbls. was imported from the United States, of which 693,633 bbls. came from Smackover, and the remainder, 253,770 bbls., from California. Oils in storage, all classes, as of date July 1, can be placed at 18,086,003 bbls., a decrease from storage figures as of January 1 of the current year of 2,087,245 bbls. Wherefore, a resume of the first six months will look like this:

Production	65,797,583
Imported crude	947,403
Withdrawn from storage	2,087,245
Total for distribution	68,832,231
Vessel movements, six months	60,947,190
Additional available for domestic consumption	7,885,041

Field Activities

Field activities during the first six months of the current year were confined largely to the northern fields in areas of production principally. The following table reflects these activities:

Fields	Comp.	Prod.	Dry, etc.
Northern	396	121	275
Southern	44	16	28
Total 6 mo. 1924	379	145	234
Total, 6 mo. 1925	440	137	303
Difference	61	8	69

To set down initial productions in this column would simply be misleading for in the majority of instances salt water invasions soon after completions will render such figures useless. This is specially true of the northern fields for the larger number of producers finished there were in the much drilled Cacalilao sector which is badly invaded with salt water despite the fact that it is still a potent factor in north fields production. The Ebano sector, with its several pools, is the least affected of any of the northern pools. The Corcovado sector, northeast of Cacalilao, was a distinct disappointment and drilling there lacks the impetus it received, say last March, when its first producers were brought in, but they showed a disposition to go to water quickly and thus far, while it is producing, and some drilling continues there, it has been a veritable graveyard for many hopes, especially among smaller independents who were enabled to get drilling locations in the blocked up acreage.

As far as the south fields are concerned, they merely contributed a few strippers in the older pools, apart from Huasteca Petroleum Co.'s extensive acreage which was good for a few wells of major size, and the latter company produced over half the oil produced in the entire southern district during the period under discussion.

Few Wildcats

In so far as distinct wildcatting was concerned, there was but little of this class of work attempted. Such territory as Corcovado and say Tortuga, the latter being in juxtaposition to the old Chila Field, could be more properly termed "near-wildcats." In the northern fields, Mexican Petroleum Co. finished a test in Tancasneque, north of the Tamesi River and slightly northwest of its failures in 1924 in the Culebra sector. The drill got the Tamasopa limestone in this hole at around 2,000 feet, stopping with a hole full of salt water at 3,285 feet. The only other test finished north of the Tamesi River during the period under discussion was American International Fuel Co.'s No. 16 Los Esteros, in Tamaulipas, north of Tampico, which marked the fifth failure drilled by them in this Los Esteros Pool since 1923, back in the days of 1908 or thereabouts some eight wells having been drilled there, showings have been encountered in some of them. Northwest of Ebnao, in San Luis Potosi, International Petroleum Co. has finished already this year three tests at El Naranjo, all of which were dry holes, although some good gas showings were encountered. It continues one test at that place at this writing.

Dropping south of Panuco and Topila, La Corona Petroleum Co. finished a failure at Los Cues at a depth of 3,054 feet; and northeast of Los Cues, in Cahuayotes, Cortez Oil Corp. finished a deep test (3,440 feet) for about 2 bbls. of very light gravity oil, which was not encouraging. International, in this same district, (speaking, generally, it is farther south), is drilling now at Tancomo. In the Quebrache, however, farther up to the northeast from Cahuayotes, Globe Petroleum Co. finished a well in Lot 80, Quebrache, a few weeks ago that looks as if it would make say 3,000 bbls. at 2,940 feet. There is some other production there already, however, which yields some free oil under dehydration, hence the recent pay completion is hardly a wildcat.

South Fields

In the south fields district, Huasteca Petroleum Co. drilled the deepest test for oil yet drilled in Mexico in its No. 1 Granadilla, (5,338 feet), but failed to get any limestone, the hole having been perfectly dry. It is situated no great distance from Laguna de Tamihua, in what was termed "No Man's Land," back in revolutionary days. Its recent efforts in Tres Hermanos, farther to the southwest where it drilled some six holes in 1913-14, have thus far been without results.

South of the Tuxpam River, International Petroleum Co. drilled a deep test in Santa Amalia, which is well east of the Penn Mex Fuel Co.'s Alamo Pool, without results. Recently, Mexican-Sinclair Petroleum Corp. finished a deep test in San Isidro, south of there, with the same zero mark. Penn Mex Fuel Co. has finished one dry hole in its Jardin and one in the extension from there, Paso Real, thus far this year. The company is now drilling a test in La Pita, well west of anything yet drilled in this district south of the Tuxpam. Mexican Eagle Oil Co. has two tests drilling away south, but just north of the old Furbero, with nothing tangible thus far. Mexican Eagle is also preparing to go back in the old Furbero Pool and drill some tests there. It is rigging for one now. This pool has been dormant in so far as drilling is concerned for the past 15 years.

Summing Up

Wildcatting on a comprehensive scale has not been indulged in to any extent, nor is there any immediate prospects of it being so done. In the northern fields the policy of operators with acreage in the old Panuco Pool is to go back there and hunt it out for "high spots." Mexican Petroleum Co., at Ebano, has much territory yet to drill in its defined acreages in that sector, and this also applies to the other Pan-American-Eastern subsidiary down south. Huasteca Petroleum Co., International Petroleum Co. and Transcontinental Petroleum Co., keep a full complement of tools running yet in Cacalilao, touching over into Corovado with a string or two each.

In the Laguna de Tamiahua, Agwi Companies are back drilling another test despite failures there in 1924. Here and there, in other pools, north and south,

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a few strings are running, looking for small wells that might at least make strippers.

There is considerable acreage held in Northern Tamaulipas, some of it close to the Rio Grande, extending south quite a ways, but thus far no moves to explore these structures has been made during the present year.

Vessel Shipments

The movement of oils during the first six months from Mexican ports of primary clearance were as follows:

	Bbls.
From Tampico	59,136,928
Port Lobos	399,111
Tuxpam	1,411,151
Total, six months, 1925	60,947,190
Total, six months, 1924	70,862,743
Decrease, six months, 1925	9,915,553

The division of the above movement:

	Bbls.
*To United States	42,788,366
Cuba	4,015,461
United Kingdom	2,613,532
South America	2,256,447
Mexican Coastwise	2,777,196
Continent	1,039,018
Panama	1,022,216
Canada	864,933
Central America	854,736
Azores	44,214
Mediterranean Ports	16,805
Bunkers (to balance)	2,954,266
Total	60,947,190

*Includes insular possessions.

The classes of oils represented in the above movement can be placed as follows: Crudes, 34,314,034 bbls., topped crudes, 20,609,348 bbls; distillates, 3,069,542 bbls.; bunkers to balance, 2,954,266 bbls.

The heavier oils of the northern fields in the above movement total 42,048,455 bbls.

MEXICAN FIELDS

Production of crude oil in first six months of 1925.

	Heavy Oil	Light Oil	Total
January	7,538,527	3,866,518	11,405,055
February	7,071,717	3,432,442	10,504,159
March	7,819,259	3,922,786	11,742,045
April	7,661,889	3,702,302	11,364,191
May	7,271,597	3,543,290	10,814,887
June	7,058,500	2,908,746	9,967,246
Totals	44,421,499	21,376,084	65,797,583

HIGHER OIL PRICES, NEW YORK BANK SAYS

While the petroleum industry of the country has been laboring under large stocks of crude oil and gasoline in the past few years, developments of recent weeks give promise of a substantial reduction in these accumulations, according to a study of petroleum trade conditions undertaken by the Guaranty Survey, published by the Guaranty Trust Co., of New York. Stocks of gasoline, owing to unprecedented consumption for the season, have shown less than the usual increase in the spring months, according to the Survey. Interpretation of the most recent data, it is added, is made difficult by changes in the system of official reporting. But what will probably prove to be this year's peak gasoline stocks, holdings at the end of May, the Survey says, were only slightly above the maximum reported last year.

"Because the variations in crude oil output are so largely governed by the element of chance there is, of course, no assurance that the downward trend will be long continued," says the Survey. "But it is a signigcant fact that the output of light oil has declined this year while the flow of heavy grades was increasing. The tardy response of production to changes in current demand seriously complicates the problems involved in the maintenance of inventories, introducing an unwelcome degree of speculation.

"Prices of crude petroleum have advanced since May. A considerable decline in average prices of gasoline in that month was recorded. But more recently these prices also have risen. The supply situation is such that drastic price advances are not in immediate prospect. Sooner or later, however, it appears that the rapid depletion of the unmined domestic reserves will materially modify the balance between supply and demand, resulting perhaps in permanently higher prices for oil and its products.

"This conclusion is supported by the fact that increasing reliance upon 'cracking' processes in the production of gasoline tends by reason of their costs to raise the price of this product. Moreover, as the most accessible pools are drined deeper drilling for crude oil, with its added costs, becomes necessary.

"If resort is made to greatly increased importation of crude, this must be expected to entail greater costs. And the same is true of more extensive working of the shale deposits, which represent the country's immense secondary reserves. The extent and rapidity of the anticipated rise in prices will depend upon the uncertain results of mining and the growth of demand.

"Until about 15 years ago kerosene was the chief refinery product. Now, although exceeded somewhat in quantity by gas and fuel oil, gasoline is by far the most valuable of the four main petroleum products. The reversal in the relative importance of kerosene and gasoline was due to the development of the internal combustion engine, particularly in the automotive field.

"The remaining oil resources of the United States were estimated in 1922 by the Geological Survey at approximately 9,000,000,000 bbls. Such estimates are highly conjectural. Future discoveries may materially modify the known reserves. Deep sands, as in the Smackover Field, may here and there be found to contain hitherto unknown reservoirs. But, in any event, the underground supply is diminishing at the rate of more than 700,000,000 bbls. a year. With an increasingly insistent demand for petroleum products, American refiners undoubtedly will rely more largely in the future upon imported supplies of crude.

"There are vast beds of bituminous shales in this country with an oil content many times as great as the petroleum reserves. These are being worked to some extent already, but unit costs of the products are high. Nevertheless, it is possible that ultimately a large part of the nation's oil will be produced from these shales.

"Meanwhile, no oil famine is in immediate prospect. But only unforeseen substitution of other fuel can, it seems, prevent an ultimate material rise in prices."

Lincoln's Municipal Filling Station Will Continue for Awhile

LINCOLN, Nebr., July 29.—The case of the Standard Oil Co. of Nebraska against the city of Lincoln, incorporated, in which the Standard company sought to close the municipal gasoline station was argued before Judge W. E. Stewart. The court refused to read 300 pages of briefs filed by Standard attorneys, but sustained the demurrer of the city that the station was legal and voted for in accordance with the charter. Judge Stewart said the case must be decided by the State Supreme Court, so took the action to hasten it on to the Supreme Court in September.

ALTITUDE PETROLEUM EXPANDS EXPORT TRADE

To carry out his company's plans of entering the export field on a large scale, M. Lloyd Freeze, vice president of the Altitude Petroleum Co. of Tulsa, has left for Europe to confer with prospective foreign buyers. The Altitude has obtained options on approximately 100,000 tons of various petroleum products for shipment to Switzerland, Italy and Austria. A subsidiary company, the Altitude Export Oil Corp., may be formed, a barreling plant built at New York and a tanker fuel business established.

JULY MEXICAN OIL TAXES

July schedule of taxes on oil production in Mexico fixes the rate on light crude at 24.38 cents a barrel, on fuel oil at 22.5 cents and on heavy crude at 12.7 cents. Rates are fractionally lower than in June. Export oil taxes, specific duties, made the total June tax on light crude 32.33 cents a barrel, on fuel oil 28.86 cents and on heavy crude 17.63 cents.

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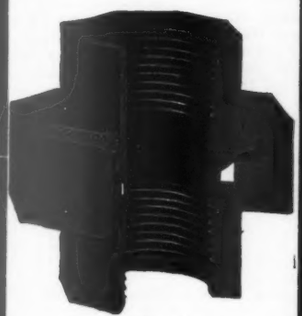

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In All Fields

SHIPMENTS FROM GULF PORTS SHOW BIG INCREASE OVER OTHER YEARS

HOUSTON, Tex., Aug. 2.—Shipments of refinery products and crude oil from the Gulf ports during the first six months of 1925 aggregated 90,098,777 bbls., compared with gross of 69,480,061 bbls. during the same period in 1924 and 49,776,982 bbls. during the first half of 1923.

These figures will be surprising to those not in close touch with the statistical situation and reflect the constantly growing importance of the Gulf ports as oil centers. The South Texas ports of Port Arthur, Beaumont, Texas City and the Houston ship channel have shown a most remarkable increase in the amounts of refinery products and crude handled during the past four years. In 1921, only eight companies were reported as shippers by water of refinery products and but six ports were mentioned. These were The Texas, Gulf, Sun, Magnolia, Standard of Louisiana, Humble Oil & Refining, Sinclair and Galena-Signal companies. The ports reporting were Port Arthur, Beaumont, Sabine, Texas City, Houston and Baton Rouge. The June report shows 14 companies shipped refined or crude or both from 12 ports on the Gulf.

The growth of the ports is told in the following table:

	Refined	Crude	Total
First six months of 1920	25,965,432	9,439,996	35,405,428
First six months of 1921	23,836,451	10,960,123	34,796,574
First six months of 1922	33,915,117	15,821,056	49,736,173
First six months of 1923	32,037,846	17,739,136	49,776,982
First six months of 1924	41,261,125	28,218,926	69,480,051
First six months of 1925	50,711,534	39,387,244	90,098,778

Export Consignments

The export consignments show about the same relative increase since 1920 as given below.

	Refined	Crude	Total
First six months of 1920	6,344,806	782,586	7,127,392
First six months of 1921	6,260,875	895,642	7,156,517
First six months of 1922	10,536,370	1,242,999	11,779,369
First six months of 1923	9,656,262	143,364	9,799,626
First six months of 1924	8,443,742	1,412,404	9,856,146
First six months of 1925	10,250,973	1,973,839	12,224,812

Increase in Crude

A glance at the crude table illustrates the increase in the amount of crude that has been sent to the Gulf Coast through pipe lines or in tank cars, from the fields in North Central, East Central Texas, Big Lake, Texas, North Louisiana, Arkansas and Oklahoma. It is then shipped to the Atlantic Seaboard refineries in tankers. The following companies have pipe lines to the coast from the fields named: The Texas, Gulf, Magnolia, Humble Oil, Sinclair, Pure Oil and Standard of Louisiana. The Magnolia company has a line from the Luling Field to Beaumont. All the coastal pools are connected with the refineries by pipe lines. Tank car shipments are made from Ponca City, Okla., by Marland Oil Refining Co.; from Smackover, Ark.; Webb County, Texas (Mirando Field), Lockhart, and North Texas.

Millions of dollars have been expended for additions to refinery plants at Port Arthur, Beaumont, Baton Rouge, Baytown, Galena, Sinco and Pasadena. The latter four locations are on the Houston ship channel. A new plant has been constructed at Smith's Bluff, near Port Arthur, by the Pure Oil Co. and terminals built at Atreco, above Port Arthur, by the Atlantic Oil Refining Co. The Vacuum, Marland and Swiftsure Petroleum Co. have shipping terminals at Texas City and the last named concern has a topping plant there. The Pierce Oil Corp.'s plant there is shut down. The Crown-Central Oil Co. has resumed operations at its Pasadena refinery, running an average of 2,500 bbls. per day of Mirando crude.

An average of 50 per cent of the total monthly water shipments go out from the Port Arthur-Beaumont district. The plants at Texas City and along the Houston ship channel furnish an average of 33 per cent of the gross and the South Louisiana plants the balance.

TIDIOUTE INTERESTED IN DEEP TEST PLANNED

TIDIOUTE, Pa., Aug. 2. — G. H. Detrie, who recently returned from India, where he was drilling for Pearson & Co., Ltd., of England, has been engaged as foreman of the crew which is to sink the deepest oil test ever attempted in this region. A second driller, just off a deep well in the Peace River, Canada, district, will arrive soon. It is planned to go 6,000 feet.

Harry Topper, of Warren, Pa., is superintendent of the lease of the Fidelity Oil Corp., of Baltimore, on the hillside above the town, where operations are under way.

A. L. Gournay, of Baltimore, who is representing the Fidelity Corp., is in charge of operations locally. He has had a force of men at work grading a road to the well site, installing a telephone and water line and erecting a house for the lease superintendent. Mr. Gournay said: "We cannot tell whether we will get a big well. If we do we shall have made a great many people wealthy and if we don't get the pool we are looking for we will simply have spent some $50,000 and had a run for our money. All in all it's the greatest gamble in the world and I believe the people of Tidioute are getting as big a kick out of it as our stockholders are."

It is expected that the concrete foundation for the heavy derrick will be finished in a few days and the derrick erected. All machinery and equipment are especially made for the job and the bull wheels, cables and engines are all especially heavy.

PETROLEUM STATISTICS

The work performed by the mineral resources division of the United States Geological Survey, now transferred to the Bureau of Mines, has been consolidated with the statistical work of the Bureau of Mines relating to petroleum refineries to form a division of mineral resources and statistics under the direction of Frank J. Katz, engineer in charge. All statistical work previously performed by the mineral resources division in the United States Geological Survey, relating to petroleum or any of its products, has been co-ordinated with the petroleum refinery statistics of the Bureau of Mines into a single unit of petroleum statistics.

OIL FIND BOOMS COLOMBIA

NEW YORK, Aug. 2.—D. A. Manning, Colombian representative of the Gulf Oil Co., has arrived on the Colombian liner Bridgetown, from Puerto Colombia. Passengers said business conditions in Colombia were booming, and that since the discovery of oil in the interior a new note of self-confidence and dignity had pervaded political life in the republc.

CHARLES WILSON DEAD

CHATHAM, Ont., Aug. 2.—Charles Wilson, for many years well known in the Canadian oil fields, died at Petrolia recently, in his 88th year. A native of County Mayo, Ireland, Mr. Wilson came to Canada in 1864, locating first at Oil Springs and later at Petrolia. In Petrolia he was receiver of oil until his retirement about 25 years ago.

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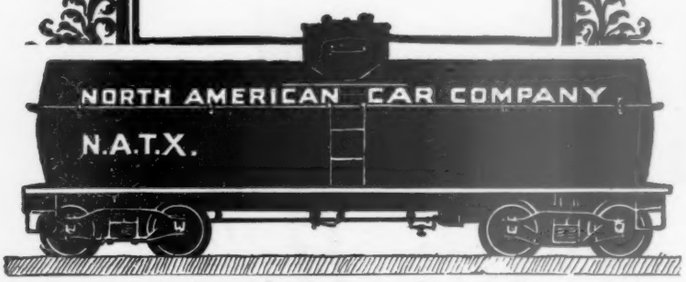

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The picture above shows a section of an eight mile line of 12-inch pipe just completed by one of the largest gas companies in the middle west. This line was tested with air pressure at 100 pounds per square inch and only 3 small leaks were discovered, all of which were easily corrected. The line has been in use for some time carrying gas at 40 pounds pressure and has given perfect satisfaction.

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NEW TYPE OF OIL WELL PUMPING JACK

The American Pumping Jack

A new type of oil well pumping jack is being introduced by the American Well Works of Aurora, Ill. It is an individual pumping outfit electrically driven, and it has been used by oil companies in many pools of the Mid-Continent Field.

The jack is fully described in bulletin No. 181, which has been issued by the manufacturers, and which gives a comprehensive idea of the function of the pumping outfit.

The "American" jacks are stoutly constructed and it is reported have proved themselves efficient under trying conditions. The jack is made in three sizes, according to the length of stroke, 12- to 15-inch, 15- to 18-inch, and 18- to 22-inch stroke. The jacks are gear driven, and the gearing is enclosed, obviating the possibility of sand or any other foreign matter getting into them. The gears run in a bath of oil which floods the bearings. The mule head is designed so that no strain comes on the bolts, and the head proper may be disengaged from the cable and swung back upon the beam permitting the rods to be pulled without moving the jack. In addition the steel beam may be swung around to secure more room if necessary when the rods are to be pulled.

The rods are raised and lowered by means of a soft laid steel cable loop which runs through an open eye in the mule head. This cable is said to do much to eliminate breakage of the power head and should the well sand up during pumping, as on the downstroke no pressure is exerted on the rods because of the flexibility of the cable.

A double gear is used on all jacks. The gears are cut with hobbed teeth and have a ratio of ten to one. The pinions are integral with the shaft and are cut from a solid piece of steel. The walking beams are made of channel iron and the sampson posts on the largest size jacks are made of 6-inch wrought iron pipe.

Adjustments for the different lengths of stroke are made by moving the pitman rod; the position nearest the sampson post giving the greatest length of stroke.

SETTLEMENT OF SUITS IN HUTCHINSON FIELD

AMARILLO, Tex., Aug. 2. — Oil leases in Hutchinson County, which have been in litigation for two years, are to be developed, following settlement out of court with operators controlling 10,000 of the 17,000 acres involved.

The Gulf, Sinclair, Pure, Vacuum and Prairie companies and Dorsett Carter, six of the principal defendants in the famous Johnson ranch suit, settlement with E. B. Johnson and others, owners of the ranch. Seven thousand acres, held by 91 other lease owners, who also were defendants, are not affected.

The Johnson ranch properties are in the Carson-Hutchinson Field. It is reported by representatives of the Humble, Indian Territory Illuminating Oil Co. (Empire), Phillips Petroleum Co., William Shoup of Colorado, and other companies are en route to inspect the acreage.

By the agreement reached with Johnson et al, the Prairie is to start a well within 30 days and Dorset Carter is to start drilling within 120 days. The entire 10,000-acre tract is now opened to development.

The Johnson ranch suit was one of the most noted in the history of the Panhandle Field, E. B. Johnson and others, owners in fee of the 17,000-acre ranch, filing suit early in 1924 against the 97 owners of leases, charging contracts had not been carried out and asking for cancellation. The case was called at Plemons early this year but was continued. A special term of court was convened at Panhandle to try the case, but it was announced an agreement was near and it was again postponed.

ACCIDENT AT WATSON PLANT

WILMINGTON, Cal., Aug. 2.—Three men were injured, two burned seriously, when the drumhead on a heat exchanger blew off at the Watson refinery of the Pan-American Petroleum Co., 3 miles north of Wilmington. Damage at the plant was slight.

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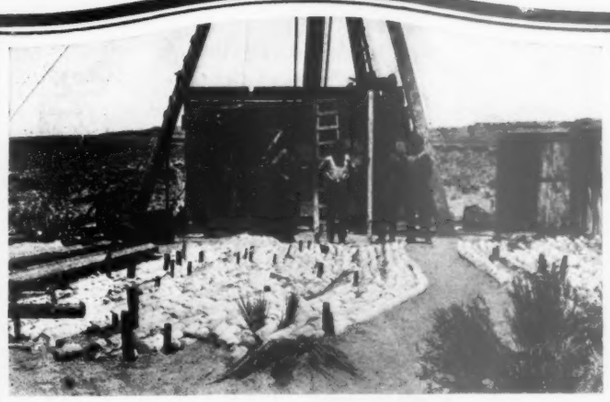

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CENTRAL WEST

(Continued from Page 50)

from the west line of the D. W. Hemming 78 acres, Section 24, is a nice gas producer at 3,300 feet.

In Prairie Township, Holmes County, the Pure Oil Co.'s No. 1 Margaret Miller farm, Section 18, is estimated at 20 bbls. In Kilbuck Township, same county, the Empire Gas & Fuel Co.'s No. 1 James L. Pyers 140 acres, Lot 8, proved a duster.

Offside Development

In Brown Township, Knox County, the East Ohio Gas Co.'s No. 7 O. J. Beck farm, Section 31, is a 1-bbl. well in the Berea sand.

The Ohio Fuel Gas Co. has a nice oil showing in No. 1, on the northeast corner of the Albert Bell 24 acres, Lot 5, Monroe Township, Holmes County. The well will be given a shot to determine its worth.

In Hardy Township, Holmes County, the Empire Gas & Fuel Co.'s test, 1,060 feet from the south line and 300 feet from the east line of the Mary E. Bridges 100 acres, Section 5, is estimated at 25 bbls., while its test in the southwest corner of the Dell Walton 46 acres, Lot ', Kilbuck Township, same county, is estimated at 30 bbls.

In Fairfield Township, Washington County, the Muskingum Gas Co. has a fair gas well in No. 1 Joseph Stevens farm, Lot 667.

Indiana

The wildcat well of Hartman, Sargent and others, on the Frank Gaither farm, in Section 21, Veale Township, Daviess County, in the southwestern part of Indiana, and an extension to the Princeton Field proper, is attracting widespread attention among oil men. The fact that the pay sand was found at a depth of 915 feet and 26 feet of oil sand passed through to a total depth of 941 feet, means the getting of good production at a shallow depth at nominal cost of operations. This well, with a flush of 70 bbls., is the best found in the Princeton area for a long period. The owners of the Gaither well are experienced operators and they hold a large territory around the new find. The Gaither well was drilled on the strength of some old wells close by and a nice price was paid for the leases. It means an active drilling campaign in the Maysville area. A new location has been made on the Cyrus McCracken farm, in the Maysville area, and work on the well is getting started and the outcome of this second venture will be watched with much interest. Many operators have visited the Gaither well since its completion and all are of the opinion that quite a prominent field will be developed in that section of Daviess County.

Pike County, also in the Princeton area, has something new to bring about additional development work. This new find was made by E. Singer and others on the northwest corner of the E. Beck farm, in the northwest quarter of Section 24, Logan Township, and a little in advance of the old Otasville Field. The top of the sand was struck at 1,319 feet and drilled to 1,349 feet, showing a flush of 10 bbls., after being given a shot. The oil was found in the Oakland City sand—a formation which invariably contains oil. In the same township, Rebdale & Chandler are drilling a test on the F. Chandler, Section 15. In Washington Township, same county, Loeb, Fought and others are drilling No. 3 C. Dawson farm, Section 18.

In Barton Township, Gibson County, the Consolidated Oil Co. and Nelson's No. 1, on the northeast corner of the T. J. Parker farm, in the northeast quarter of Section 17, struck top of sand at 1,304 feet and drilled 19 feet in, showing 10 bbls. flush and widening out the field a short distance. Young and others are drilling a test on the G. W. Finch farm, Section 6, same township, and the Consolidated Oil & Nelson are drilling a second test on the Eliza M. Harper farm, Section 8.

In Hamilton Township, Sullivan County, R. G. Smith is drilling a test on the A. J. Ross farm, Section 10. In Gill Township, Fred Bays is drilling a second test on the R. M. Bledsoe farm, Section 26. In Turman Township, the Ohio Oil & Kennedy are drilling No. 19 Josephine Dix farm, Section 1. Billman and others are at work at a test on the C. Woner farm, Section 17, and J. R. Riggs is drilling a test on the J. R. Riggs, Section 35.

Eastern Indiana

Eight completions are reported from the Trenton Rock Field of eastern Indiana, none above the average. In Penn Township, Jay County, A. M. Jones' No. 2 Bourne Brothers farm, Section 22, pumped 10 bbls., while No. 3 was dry, and No. 4 drilling. The Amber Oil Co., Inc., drilled a duster in No. 11, on the S. E. Davis farm, Section 21.

In Bear Creek Township, Jay County, J. J. Adams drilled a 15-bbl. pumper in No. 8 D. M. Callahan farm, Section 7, and the Shamrock Oil Co.'s No. 1 S. R. and N. Pyle farm, Section 4, pumped 5 bbls. J. E. Dilts has abandoned Nos. 1, 2 and 3 on his own farm, Section 6. The National Supply Co. abandoned Nos. 1, 2, 3, 4, 5 and 6 J. W. Polly farm, and Nos. 2, 3, 4, 5 and 6 W. S. Frank farm, Section 34.

In Noble Township, Jay County, Rice & Cross drilled a 10-bbl. pumper in a test on the H. C. Anderson farm, Section 4. In Richland Township, same county, C. E. Whittingill drilled a duster in a test on tne A. N. Wilson farm, Section 20.

In Harrison Township, Blackford County, J. W. Neely abandoned Nos. 1, 2, 3, 4, 5, 6, 7 and 8 Maratta Shannon farm, and Nos. 3, 4, 5, 6, 7, 8, 9 and 10 Ellen P. Nye farm, all in Section 16, and the Montpelier Development Co. is drilling a test on the A. F. Gerard farm, Section 1.

In Delaware Township, Delaware County, Hoke, Sargent and others drilled a duster in a test on the J. O. Dehaven farm, Section 14, and drilling a test on the Levi Brooker, Section 24. Clark & Hawkins are drilling No. 9 L. M. Coons farm, Section 16.

Illinois

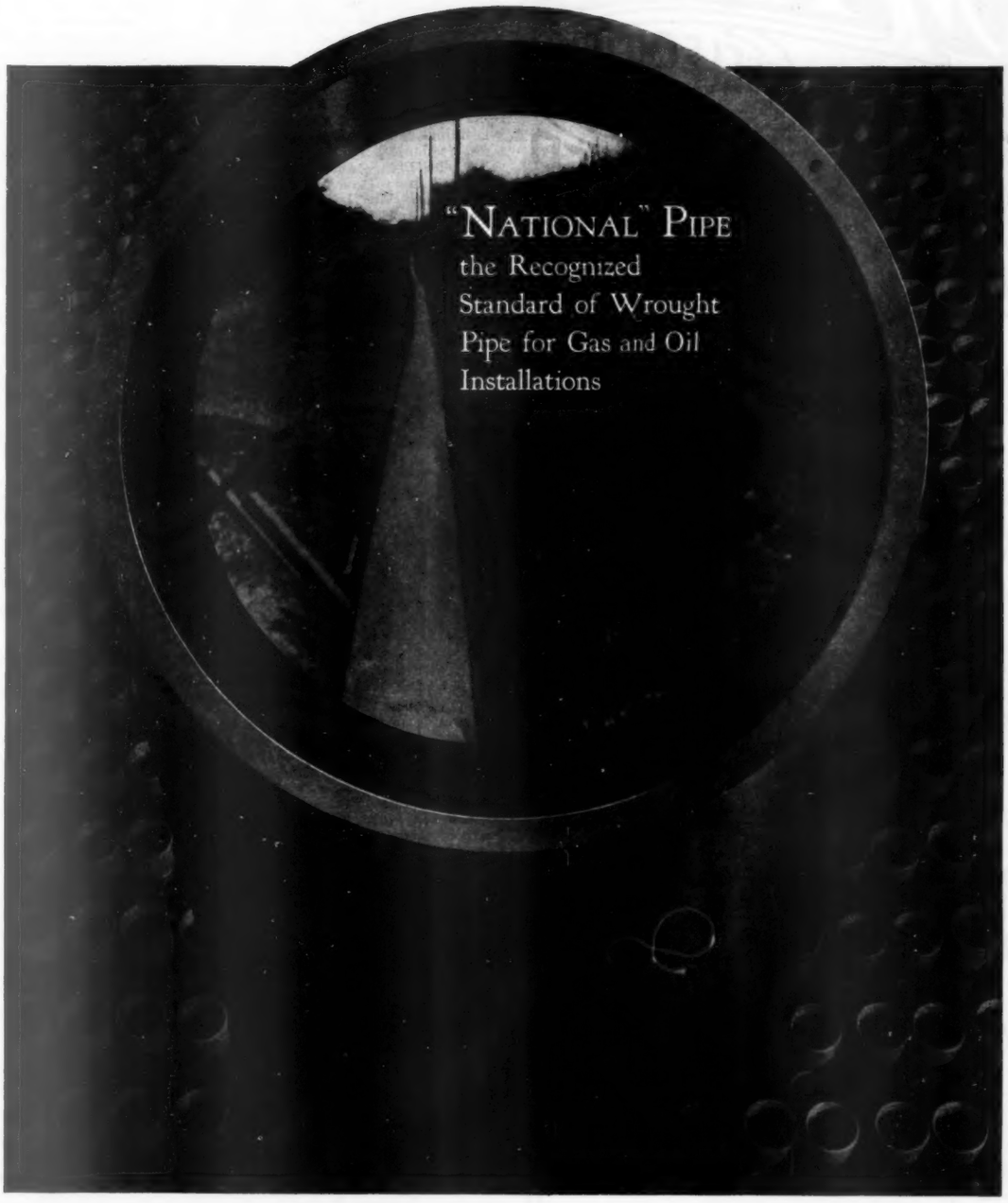
Quite a surprise was sprhng when the International Oil & Gas Co. drilled in its No. 13, 300 feet from the north line and 577 feet from the east line of the McCloskey farm, in the southeast quarter of Section 25, Dennison Township, Lawrence County, in the heart of the Illinois Field and struck a producer at 1,650 feet, the oil coming from the McCloskey sand. The well produced 100 bbls. and is on the farm where the first McCloskey sand was found productive, being named after the farm owner when the original well was drilled, which did in the neighborhood of 2,500 bbls. flush.

No. 19 of the Big Four Oil & Gas Co., 225 feet from the north line and 660 feet from the east line of the Sherman Gillespie farm, in the northeast quarter of Section 26, Dennison Township,, Lawrence County, produced 50 bbls. from the McCloskey sand at a depth of 1,670 feet. In the same township, the Ohio Oil Co. is drilling No. 8 on the E. Meagher farm, Section 5.

In Lawrence Township, Lawrence County, the Ohio Oil Co. and Eilurian Oil Co.'s No. 9 Mary E. Penner farm, Section 13, and in the norteast corner of the farm, pumped 5 bbls. In this well the first sand was found at from 1,527 feet to 1,540 feet; second sand from 1,642 feet to 1,660 feet, and third sand from 1,662 feet to 1,674 feet. In Bridgeport Township, same county, the Ohio Oil Co. is drilling No. 12 E. Combs No. 2 farm, Section 31.

In the stray sand field in Martinsville Township, Clark County, Ellis, Myers and others' No. 1, in the northeast corner of the Wheeler Baker farm, in the northeast quarter of Section 31, produced 75 bbls. from a depth of 1,428 feet. This farm is mapped as the J. Poe No. 2, same farm, is drilling. C. W. Titus and others are drilling No. 3 Mary J. McClelland farm, Section 31. John T. Smith and others are drilling No. 2 T. J. Ramsey farm, same section. Van Orden and others are drilling No. 4 D. Morgan farm, Section 30. Trenton Rock Oil & Gas Co. is doing the same at No. 4 John S. Carper farm, same section, while the Ohio Oil Co. is drilling No. 17 S. M. Brosman, same section.

In Parker Township, Clark County,



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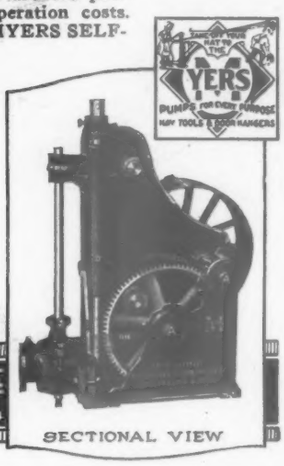

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King, Baldridge and others are drilling No. 3 M. B. Lee, Section 32; W. H. Squires is doing the same with No. 277 C. T. Marshall, Section 19, and the Ohio Oil Co. is drilling No. 38 A. J. Bigelow farm, Section 6. In Casey Township, B. H. Heaton and others are drilling No. 4 John Laigner farm, Section 24.

In Honey Creek Township, Crawford County, the Ohio Oil Co. found a dry hole in a second test on the John Kent No. 1 farm, Section 7, and J. D. Toomey is drilling No. 14 Highsmith Brothers farm, Section 20. In Montgomery Township, John Phipps and others are drilling No. 1 Mary Duncan, Section 21. In Prairie Township, John S. Abbott and others are working at No. 12 on the J. A. Newlin, Section 25. In Licking Township, same county, the Peoples Bank & Trust Co.'s second test on the Silas Wilkin farm, in the southeast quarter of Section 4, located on the northwest corner of the lease, struck a gas sand at a shallow depth of 478 feet but drilled into an oil sand from 974 to 1,015 feet, which made a poor showing and the pipe was perforated at the gas sand and the salt water shut off from the lower depth. In Martin Township, James Pease and others are drilling No. 14 on the Savilla Shipman farm, Section 26.

In Wabash Township, Wabash County, J. S. Young and others are drilling a test on the D. H. Price farm, Section 36, and Phipps & Blosser are drilling No. 1 M. Richter, Section 33.

In Ashmore Township, Coles County, H. McCurdy and others drilled in a test 200 feet from the north line and 1,025 feet from the west line of the B. Humphreys farm, Section 27, and found their sixth straight dry hole drilled in the township during the past several months, and according to advice, expects to drill at least four more tests. The last well proved dry at 547 feet.

Prospective New Field

There are prospects of the opening up of a new oil and gas field, more so a gas field, in the vicinity of Jacksonville, Morgan County, Illinois, and almost directly west of Springfield. Operations started in Morgan County back in 1911, when Frank Byrns, a merchant of Jacksonville, succeeded in interesting William Curtis and Clarence A. and Harry W. Leeper, old-time Pennsylvania and Ohio operators, in drilling a number of wells in Morgan County. At that time the price of oil being very low and the wells showing oil were small, these parties being interested in other fields where production was much larger, they abandoned their work in the county, however, not plugging some of the wells, according to Mr. Byrns, and some of the land owners retained the gas wells that had been drilled. The oil and gas wells drilled at that time, 1911, are still producing, says Mr. Byrns.

About three years ago, C. F. Rhodes made arrangements with Mr. Byrns and others to do more developing and put down three wells to shallow depth, and one deep test hole to a depth of a little less than 1,500 feet. This hole was paid for by a large group of Morgan County business men. The Trenton Rock was found to be so hard that there was no oil in it, although strong odor of oil was present. At about the time a deep well was finished Mr. Rhodes had an attractive offer to go elsewhere so the local group discontinued drilling.

However, C. P. Irwing, of Iola, Kans., and others were drilling on a nearby farm and after drilling a number of gas wells that showed from 1,000,000 to 3,000,000 feet, they drilled one that is reported to have shown a flush volume of 9,000,000 feet. Some complications between the parties interested caused them to stop, and the past two years have seen little activity.

W. D. Cody, a local Jacksonville business man, interested others and put down two wells in Section 2-15-9w, each of these wells proving to be good gassers. Recently Mr. Cody and others sold their leases to parties who claim they are going to put in a pipe line to furnish natural gas to Jacksonville. They have engaged Mr. Irwing to oversee the drilling of a well about 300 feet from the gas well on the O. F. Conklin farm, same section.

Cody and others are to begin drilling another well on another farm owned by O. F. Conklin, Section 7-15-9w, Morgan County. Three car loads of pipe are reported and work of laying a pipe line to Jacksonville will start soon unless some unforeseen trouble shows up.

KENTUCKY-TENNESSEE

(Continued from Page 54)

taining salt, encountered gusher production at from 150 to 250 feet below the black shale in the Sunnybrook formations and when bailed a short time ago showed oil testing 37 degrees Baume. According to R. F. Main, preparations are under way for an extensive drilling campaign in southern Adair County, some 14 miles south of the town of Columbia, where Louisiana capitalists have acquired a large block of acreage on which their geologists claim excellent structural conditions exist.

In Grayson County, two wildcat tests are being made by J. A. Beam and associates on the Major farm, 6 miles from Leitchfield. Several test wells have been drilled in this county that had good showings of both oil and gas and if the wells now drilling show commercial production quite a bit of new development will take place.

Owensboro Field

The Pennsylvania-Indiana Oil Syndicate is credited with the best well of the week in the western division on its Swope lease, in the Owensboro district. It came in for better than 25 bbls. from the Barlow sand and is holding its flush in good shape.

In the Hurricane Pool, the Panther Creek Oil Co.'s No. 16 R. Miller, 400 feet west of No. 10, is pumping 8-bbls. from the Barlow sand at 742 feet. The Miller property is one of the best in the field and is being developed as fast as possible.

R. E. Diament's test on the Sinnett place, north of Whitesville, is reported dry and abandoned in the Barlow sand at 835 feet. The shallow Jett sand was unproductive.

Development Under Way

There are 23 wells now drilling in the Owensboro section, comprised of Hancock, Ohio and Daviess Counties, 6 in the Swope Pool, 6 in the vicinity of Colliers Station, 5 in the Hurricane Pool, 5 at Pellville and 1 in a remote section of Ohio County, near Bedo.

In the Swope Pool, the Chicago Petroleum Syndicate's No. 2 Ira Crowe, in the southwest corner of the lease, was spudding at 60 feet; C. E. Daugherty's No. 6 Widow Crowe, rigging up; Pennsylvania-Indiana Oil Syndicate's Nos. 6 and 8 Jess Swope, drilling at 550 and 120 feet, respectively, (No. 6 is 400 feet south of No. 1 and No. 8 is north of No. 3 Colonel Powers), the same concern's No. 4 Colonel Powers was rigging up; Powers & Cornell's No. 1 Frank Bowman, east of the Colonel Powers tract, drilling at 400 feet; Central Southern Oil Co.'s No. 1 R. Ellis, offset to the Ira Crowe and J. M. Bartley farms, was going ahead at 230 feet. If this test proves to be a producer it will serve to connect the Swope and Collier Station Pools.

The Hurricane and Pellville districts show the following activity: Panther Creek Oil Co.'s No. 7 J. W. Smith, 400 feet northeast of No. 6, cleaning out; Pennsylvania-Indiana Oil Syndicate's No. 10 F. V. Miller, rigging up and No. 6 Abe Howe, west of Barker No. 2, drilling at 100 feet; I. N. Harkless spudding in on the J. S. Huff tract, east of the Burdette; same party's No. 1 Kate Phillips, east of the Lafe Payne, shut down in the Barlow sand; Wood Oil Co.'s No. 1 C. H. Wyles, east of the Jett and Stewart leases, and No. 1 W. E. Tyler, west of the Norah Chambers, drilling at 209 and 250 feet, respectively; White Plains Oil & Gas Co.'s No. 1 McBrayer, offsetting the Ira Jett, was shut down with a broken pitman pin at 100 feet; Leeper Oil Co.'s No. 2 H. D. Brown, west of No. 3 Bert Thompson, cleaning out; Kentucky Oil Co.'s No. 18 Amanda Stewart, offset to the Taylor, is in the Barlow sand with a good oil show.

Drilling is slackening up in Barren County as pools that were opened late

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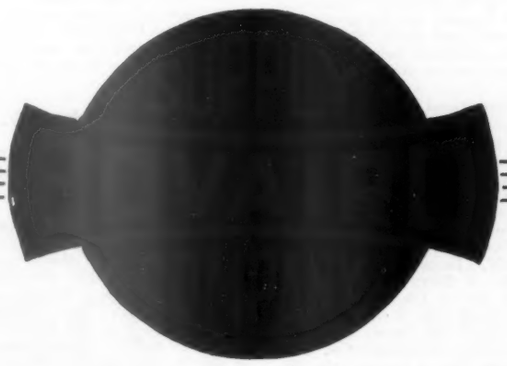

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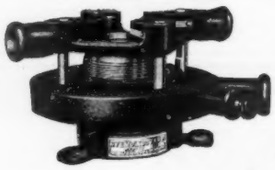

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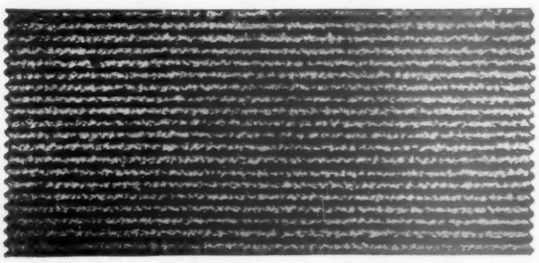

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last year are practically drilled up, and as numerous out-of-the-way tests were dry, there is no chance for it to continue in the lead unless some new spots show production. Last week, two wildcats drilled near Austin, 5 miles southwest of Glasgow, proved failures. They were No. 1 Britt, drilled to 90 feet below the shale, and No. 1 McKenzie, drilled to 100 feet below the shale.

The best strike of the week in Barren County is the Consolidated Gas Co.'s No. 4 Depp, good for 15 bbls. at 100 feet below the black shale. The Depp property is in the new Beaver Creek Pool, north of Glasgow. In the same vicinity, the Consolidated finished its second well on the Preston farm for 8 bbls. at 540 feet, 100 feet under the shale.

In the Emery-Moore Pool, the Houchins Leasehold Co. brought in No. 1 on the G. Mansfield for 6 bbls. at 600 feet, 185 feet below the shale. This concern's Nos. 9 and 10 Ziegler are rated at 10 bbls. each at 602 and 597 feet, respectively. On the Howard farm, Fred Moore got an 8-bbl. starter in his No. 6, 400 feet west of No. 5, at a total depth of 484 feet. The shale was from 211 to 264 feet. Sixteen feet of sand was shot with 40 quarts.

In the Gorby Pool, L. J. Emery, Jr., & Sons are reported to have drilled in a duster in their No. 13 Depp & Greer at 370 feet. This is one of the best leases in the field and is making 75 bbls. per day from 12 producing wells. The Emery interests are the largest producers of crude in western Kentucky with a daily production of 250 bbls. per day in Barren County.

Drilling Wells

The Star Oil Co.'s Nos. 31 and 32 Ritchie, are both in the sand and will be finished within a few days; Fred Moore is spudding No. 7 Howard; Laree Oil Co.'s No. 3 Reagle was shut down on account of a small fire caused from a pocket of gas; Alladin Oil Co.'s No. 2 Oakes, is showing about 4 bbls. in the Beaver sand; Fred Moore's No. 4 Gassaway, drilling below the shale; Craig Oil Co.'s No. 16 Smith, drilling at 98 feet; Wiggins & Gillespie's No. 11 Howard, spudding in ; Elem Oil & Gas Co.'s No. 11 Warder, spudding; L. J. Emery, Jr., & Sons' No. 2 Gum, rigging up; Porter and others' No. 1 Nichols, drilling in the lower pay; Esslinger Oil Co.'s No. 6 Jones, drilling at unknown depth; L. J. Emory, Jr., & Sons' Nos. 14, 15 and 16 Depp & Greer, drilling below the shale; Hiland Oil Co.'s No. 7 Cassidy, drilling at 100 feet; Porter and others' No. 8 McGlocklin will be in the shale Tuesday; Consolidated Gas Co.'s No. 1 Jim Jones, shut down; No. 4 Turner, drilling in shale; No. 5 Depp, spudding; Wood Oil Co.'s No. 1 Taylor, drilling at 100 feet; No. 3 Redman and No. 3 Houck Brothers, drilling in the shale; same company's No. 2 Mary Church, in the sand; No. 9 J. M. Church, shut down; Harrington & Norris' No. 8 Evans, being rigged up to pump; same parties' No. 2 Hucherson, cleaning out.

Cumberland County

Due to heavy rains the past week Cumberland County producers were unable to get over the roads and consequently little was accomplished. The Daniel Boone Oil Co. drilled its No. 5 Lucy Logan, in the Kettle Creek district, from the Sunnybrook sand to 158 feet below the Pencil Cave where it is pumping 10 bbls. naturally. In the same area, Coe Brothers' No. 1 Mary Scott, is shut down with a fishing job, while McClintock & Raydure's No. 2 Anderson, is progressing below the Cave.

At Judio Creek, the Judio Co., Inc., cleaned out its No. 1 Humes, the discovery well at Judio Creek, in the original pay at 29 feet below the Pencil Cave, in what is called the Judio sand, and was rewarded with a production of 9 bbls.

At Sulphur Creek, Raydure & Son's No. 2 M. E. Coop, is being reamed so that 6¼-inch casing can be set below the Cave. Hook and others' No. 1 Vess Nun, was drilling at 70 feet below the Cave; Wilcox Brothers' No. 1 Melton, on the headwaters of the Williams Prong of Sulphur Creek is being rigged up. This test will be watched closely as it is a pure wildcat venture.

Freeman & McCormick's No. 4 T. Bow, at Bear Creek, is drilling on top of the first Sunnybrook sand; Wilcox Brothers were down 285 feet and drilling on No. 3 Sarah Sheckles, on the headwaters of Steels Fork of Bear Creek. This well picked up the Brush Creek sand at 265 feet to 280 feet, which showed for 1 bbl. natural.

The Vedder Oil Co.'s No. 1 M. C. Scott, at Fannis Creek, has been deepened to the Anderson sand at 430 feet, where it is showing for an excellent producer. Production figures are not yet available as the pumping test has been delayed until tank room was available.

Warren and Allen Counties

Warren and Allen Counties still remain quiet and the week in review showed but six completions, three in each county. In Warren County, Joe Goldberg's No. 1 C. P. Kelley, at Rockfield, is dry and abandoned in the shallow sand at 550 feet.

In the Davenport Pool, the Belvedere Oil Co.'s No. 1 C. A. Keller, is a small stripper at 876 feet. Shale was from 692 to 774 feet and the sand from 753 to 761 feet. The second well has been started about 1,500 feet north and east of No. 1. On the Wilson tract, the Onsel-Harnahan Oil Co.'s No. 9 Wilson, is estimated good for 4 bbls. at 1,166 feet, 90 feet below the black shale. The New Domain Oil & Gas Co. is starting No. 7, on the Bessie Snell land to offset the Wilson.

The only producer credited to Allen County is W. L. Baird's No. 1 Joe Allen No. 2 farm, good for 3 bbls. at 320 feet, 50 feet below the shale. E. M. Treat & Co.'s initial test on the W. E. Simmons farm, just outside the city limits of Scottsville, adjoining the Cockrill, is a duster at 301 feet, 105 feet below the shale. On the J. Smith place, unknown parties got a dry one at 243 feet, 50 below the shale.

Eastern Division

The North Weir Sand Field of Lawrence and Johnson Counties furnished the banner producer in the eastern division of Kentucky the past week. It is the Union Gas & Oil Co.'s No. 13 C. K. Doyben No. 1 farm, rated at 25 bbls. from the Weir sand. In district No. 33, David Fox made a 2-bbl. pumper out of his No. 2 J. D. Fox, from the Weir.

South Weir Field

In the South Weir Field of Johnson and Magoffin Counties, the Petroleum Exploration brought in Nos. 23 and 24 W. S. Adams, district No. 27, for 2 and 4 bbls. respectively, from the Weir sand. In district No. 29 O. J. Hamlin's No. 2 Jesse Borders, is a 1-bbl. stripper from the Weir pay.

Floyd County

Two gas wells drilled by the American Roller Mills Co. in the Summit section of Floyd County are reported making 250,000 feet each from the Corniferous sand.

PENNSYLVANIA-W. VA.

(Continued from Page 54)

Roane County, Godfrey L. Cabot has a duster in the Big Injun sand at a test on the W. T. Arnett farm.

Week-End Developments

In Section 5, Monroe Township, Holmes County, the Ohio Fuel Gas Co. completed a test on the Albert Bell farm, showing for a 15-bbl. pumper in the Clinton sand. This location is one-half mile south of the Welcome church. The Pure Oil Co. has completed a test on the O. Williams farm, in Section 15, Bowling Green Township, Licking County, good for 10 or 12 bbls. a day. The location is 1,200 feet west of the Midland Oil Co.'s test on the Frank L. Orr farm. In Section 22, Monroe Township, Holmes County, 1 miles north of the Welcome church, the Empire Gas & Fuel Co.'s test on the William Martin farm is dry in the Clinton sand. A fair gas pressure was developed in the Newburg sand. In Lawrence Township, Washington County, Frank H. Rice & Co. drilled their No. 4 on the George

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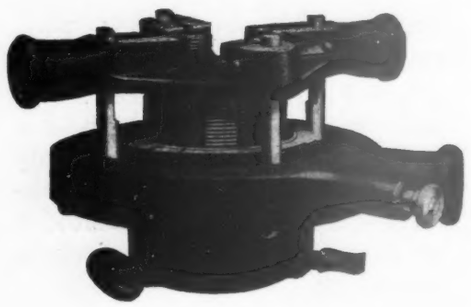

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—SPECIFIED BY THOSE WHO KNOW

G. Dye farm from the Cow Run to the Big Injun sand. It is a duster in the lower formation. In Lot 80 Athens Township, Athens County, Gross & Frebault completed in the Berea grit, No. 3 on the Daniel N. Higgins farm, good for 10 bbls. a day.

Good Producer in Licking County

In Section 14, Hanover Township, Licking County, the Carter Oil Co. shot in the Clinton sand its test on the Hanover Brick Co.'s property, drilled through the sand a few days ago, and by swabbing recovered 88 bbls. the first 24 hours. In Coal Township, Perry County, the Chartiers Oil Co. completed and shot in the same formation, No. 95 on the Hocking Valley Products Co.'s property. It failed to respond to the shot but will make a light producer.

The Oldtown Oil & Gas Co.'s test on the John T. Nutter farm, in the southeast quarter of Section 27, Falls Gore Township, Hocking County, is a gasser in the Berea grit good for 500,000 feet. In Section 24, Rush Creek Township, Fairfield County, J. F. Thompson & Co. completed No. 6 on the C. L. Work farm, good for 10 bbls. a day. The location is 700 feet east of No. 4 on the same farm.

Starting New Work

In Clay Township, Knox County, William Carson has started to drill a second test on his own farm. In Section 32, Ward Township, Hocking County, the Evans Oil & Gas Co. has started to drill on the National Fireproofing Co.'s property. In the same township, the Sunday Creek Coal Co. has started to drill No. 128 on its own property. In Lot 14, Hanover Township, Licking County, the Carter Oil Co. has a rig up for No. 8 on the Jacob Vandenbark farm. In the same locality, the Edward H. Everett Co. has the rig completed for a test on the Mrs. J. Simpson farm. In Lot 13, the Carter Oil Co. has the rig completed for a second test on the B. Connell farm.

In Section 21, Franklin Township, Licking County, J. Y. Bebout has moved a drilling machine to a location on the Anna Delong farm, 1½ miles northwest of the Midland Oil Co.'s production on the Homer Cooperrider farm. Oil is expected in the Berea grit. In Newton Township, F. M. Rugg & Co. have started to drill No. 8 on the Jacob Weiss farm. In Section 2, Clay Township, Knox County, the Arkansas Fuel Co. has started to drill No. 5 on the Clay Scott farm. In Section 18, Adams Township, Guernsey County, the Logan Gas Co. is moving in rig timbers to the location for a test on the W. E. Oliver farm. The Eastern Carbon Black Co. has spudded in a test on the Charles W. Burris farm, in Westland Township, Guernsey County. Keith Brothers & Co. have the rig completed for a test on the Keith Brothers' farm. Local parties have shut down at a test on the Haney farm. The Pure Oil Co. is down 2,000 feet at a test on the J. W. Mason farm. In Section 13 Knox Township, the Ohio Fuel Gas Co. is building a rig on the Leona M. Clark farm. In Section 28, Monroe Township, Perry County, the Allegheny Oil Co. has started to drill a test on the James W. Bigum farm. In Pleasant Township, Marshall & Marshall are drilling No. 28 on the Donohue farm.

West Virginia Latest

In rounding out the week of development work, the West Virginia fields completed nothing better than light pumpers in old territory. In Washington district, Pleasants County, Dinsmoor & Co. drilled No. 10 on the J. S. Smith farm through the Cow Run sand, good for 3 bbls. a day.

In Burning Springs district, Wirt County, George B. Vance completed and shot in the second Cow Run sand No. 42 on the William Gibson farm, not good for more than 2 bbls. a day. The Premier Window Glass Co. drilled its No. 5 on the R. T. Haymond heirs' farm, in Clay district, Ritchie County, through the Big Injun sand and dry.

Dry in All Sands

In Elk district, Harrison County, R. T. Lowndes has drilled No. 5 on his own farm through all sands and dry. George Travis has a 5-bbl. pumper at No. 4 on the Augustus Drainer farm, in the Big Injun sand, in Greenbrier district, Doddridge County. In Carroll district, Lincoln County, the Columbia Gas & Electric Co. has a gasser in the Berea grit at a test on the J. H. Vickers heirs' farm. In Washington district, Calhoun County, the Hope Natural Gas Co.'s test on the M. B. Keith farm is a gasser in the Big Injun sand. In Center district, Gilmer County, the Ohio Fuel Oil Co. has a gasser in the Big Injun sand at a second test on the Cora Holt farm. In Murphy district, Ritchie County, the Hope Natural Gas Co. has a gasser in the Big Injun sand at No. 3 on the Albert Vanhorn farm. In Paw-Paw district, Marion County, the Owens Bottle & Machine Co. has a light pumper in the Big Injun sand at a second test on the Clayton heirs' farm.

Marshall County

In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has a 5-bbl. pumper in the Gordon sand at a test on the Burley-Evans farm. In the same district, the same company has a gasser in the Big Injun sand at a test on the Ernest A. Gully farm. The Carnegie Natural Gas Co. has a gasser in the same formation on the L. E. Conaway farm. In Union district, Tilby & Oliver have a gasser good for 1,000,000 feet on the Albert and Emma Schenk farm.

The Virginia Gasoline & Oil Co. completed another fair producer on the J. B. Casto farm, in Henry district, Clay County. It is this company's No. 3 on the Casto farm, good for 30 bbls. a day in the Big Injun sand. The location is 600 feet south of No. 2. The same company has the rig completed for No. 4, 600 feet south of No. 3. In the same district, the Ohio Fuel Oil Co. has the rig completed for a second test on the J. B. Casto 220 acres, 600 feet south of the first test on this tract.

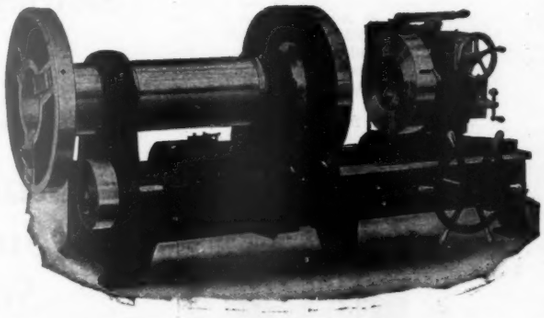
Light Pumper in Pleasants

In Jefferson district, Pleasants County, G. B. White and others have drilled a test on the H. H. Hall farm through the Maxon sand. It is showing a little oil and has considerable gas. In Union district, Ritchie County, the Carnegie Natural Gas Co.'s test on the A. H. Tate farm is a gasser in the Big Injun sand. On Walnut Run, McElroy district, Tyler County, the Carter Oil Co. has completed the rig for a test on the E. Dillon farm. In Clay district, Monongalia County, the South Penn Oil Co. has started to drill down to the lower sands No. 11 on the Simon Tennant farm. In Union district, Tyler County, D. E. Sanders is moving in a rig to a location on the A. R. Williamson farm.

In Freemans Creek district, Lewis County, the Reserve Gas Co. has completed to a total depth of 4,675 feet its test on the Alvador Hughes farm. It is a light gasser in the Benson sand. In the same district, the Pittsburgh & West Virginia Gas Co.'s second test on the Moses T. Law farm is dry in the fifth sand, at a total depth of 2,915 feet. On Anna Maria Creek, Sheridan district, Calhoun County, M. F. Crowley's test on the James Amos farm is a gasser in the salt sand good for 250,000 feet. On McKim Creek, McKim district, Pleasants County, the Neeley Oil Co.'s test on the W. B. Singleton farm is dry in the Keener sand.

Starting Test Wells

In Ten-Mile district, Harrison County, D. E. Ritter & Co. have made the location for a test on the J. E. Williams farm. In Birch district, Braxton County, the Mill Fork Oil & Gas Co. is due in the Big Injun sand at a second test on the W. G. Bennett farm. In Center district, Calhoun County, the Hope Natural Gas Co. has made a location on the Lottie McAndree farm. In Lee district, Calhoun County, the Hope Construction & Refining Co. has moved a rig and tools to a location on the John Bell farm. In the same district, the Rockdale Oil & Gas Co. is fishing on the Everett Starcher farm. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. is cementing a cave at 1,700 feet on the S. B. Higgins farm. In Cameron district, the P. O. M.



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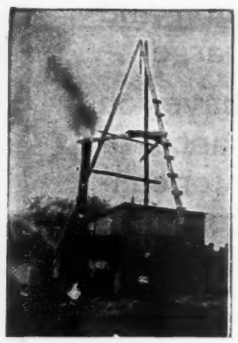

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Determine elevations;

Determine the nature, thickness and porosity of the sand;

Place wells to eliminate possible dry holes;

Space wells to secure maximum production at minimum cost.

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& B. Co. is running the 6⅝-inch casing on the George McCracken farm.

In Glenville district, Gilmer County, the Pittsburgh & West Virginia Gas Co. has started to drill a test on the N. J. Frasher farm. In Courthouse district, Lewis County, W. E. Turner is building a rig on the J. H. Livingston farm. In Simpson district, Harrison County, the Aizolurian Gas Co. is due in the Gordon sand at a test on the Nathan Prichard farm. In Mannington district, Marion County, the Clifton Oil & Gas Co. is due in the Big Injun sand on the Belle Snider farm the Mellon Oil Co. is building the rig for No. 3 on the W. E. Conaway farm, in Grant district, Ritchie County. In Jefferson district, Kanawha County, the Tampico Oil Co. is rigging up on the Pike heirs' farm.

In Lee district, Calhoun County, M. F. Crowley has the rig completed for a test on the Ida McCoy farm. On Camp Run, 1 mile north of Wadestown, Batelle district, Monongalia County, the Manufacturers Light & Heat Co. has the rig up for a test on the Lemley Tennant farm. Four miles south of Wadestown, the same company has a rig completed and ready to drill a test on the Simon Youst farm. In Skin Creek district, Lewis County, the Mud Lick Oil & Gas Co. has a rig up on the M. E. Bott farm. In Collins Settlement district, the same company has rig up on the S. L. Cunningham farm. On Fink Creek, Freemans Creek district, the South Penn Oil Co. has the rig completed for No. 7 on the Ira P. Simmons farm.

Southwest Pennsylvania

In Richill Township, Greene County, the Manufacturers Light & Heat Co. has a Gordon sand gasser at a second test on the John G. Nichols farm. In Aleppo Township, Ralph McCracken & Co. have a gasser in the same formation at a test on the Charlotte Tharp heirs' farm.

MORE GASOLINE TAX; NO LICENSE ON CARS

LANSING, Mich., Aug. 2.—Plans to eliminate the annual automobile license but increase the gasoline tax from 2 to 3 cents a gallon are being proposed for Michigan. Under the proposed plan, the entire burden of maintaining and constructing State highways would be placed on gasoline sales. As a substitute for the automobile identification numbers, plates would be issued at a nominal cost to last the lifetime of the car.

TEXAS COMPENSATION ACT

HOUSTON, Tex., Aug. 2.—The Commission of Appeals, with the approval of the Supreme Court of Texas, has defined what constitutes an "injury" or "personal injury" as used by the Texas Workmen's Compensation Act. The words "damage or harm to the physical structure of the body" occur in the statute. A case came up of a field worker, drenched by recurring rains, who contracted a cold which developed into pneumonia. A claim of compensation refused, the court holding that the disease was not an "injury" within the meaning of the Act.

JUDGMENT AGAINST GERMANY

HOUSTON, Tex., Aug. 2.—Judgment has been awarded The Texas Co. by the Claims Commission against the German Government for $547,845.63 with interest at 5 per cent from November 11, 1918. The judgment is for the loss by a subsidiary of The Texas Co. of a terminal at Antwerp, and many distributing stations throughout Belgium, all of which were seized by Germany in 1914. During the war the German Army requisitioned the petroleum products of The Texas Co. and used the terminal as an aviation supply and repair center.

DEATH OF MRS. J. M. DOUGLAS

LOS ANGELES, Cal., Aug. 2.—Mrs. James M. Douglas, wife of the chief geologist of the Union Oil Co. of California, who has made her home in Fort Collins, Col., for about a year, died there recently.

Petroleum Princess Contests Have Begun In Many Oil States

Petroleum Princess contests were launched simultaneously in 12 oil-producing states on August 2 and the nation-wide competition which will bring the most beautiful young women of the oil regions to Tulsa for the third annual International Petroleum Exposition, to be held in Tulsa from October 1 to 10, is under way in full force.

Newspapers in Pennsylvania, Texas, Ohio, West Virginia, Kentucky, Montana, Wyoming, Colorado, Louisiana,

MISS RAMONA MARCELLA TREES of Winfield, Kans., "Queen Petrolia" of 1924-25

Arkansas and Kansas have been invited by Mayor H. F. Newblock of Tulsa to hold regional contests and to send their beauties to the court of "King Petroleum" and "Queen Petrolia" again this year.

Miss Ramona Marcella Trees of Winfield, Kan., "Queen Petrolia" of 1924-25, will return to the Exposition to reign over the pageantry and social affairs until her successor is selected. It will be from the ranks of the beautiful young women from the various oil-producing states that the new "Queen Petrolia" will be chosen. A secret committee will be named by the Board of Directors of the Petroleum Exposition to select the new Queen from the ranks of the Princesses. The girls will be judged for their beauty, charm, grace, personality and popularity and will be observed at all public receptions, pageants and social gatherings.

The beautiful young princesses will be given their complete wardrobes by the business firms in the cities which they are chosen and will be brought from their homes, together with their chaperones, and entertained in Tulsa during the oil show as guests of the Exposition.

The "Pageant of Petroleum," the "Princess' Parade" and other elaborate street spectacles will be the most gorgeous ever staged by the Exposition, according to oil show officials, while the Queen's ball, Mayor's reception and other dinners and teas will be among the principal events of the week.

PAWNEE-COMANCHE LEASE SALE

OKLAHOMA CITY, Okla., Aug. 2.—Secretary W. A. Durant of the Oklahoma Land Office announces that the commissioners have fixed the minimum of a bond required of those contracting to drill for oil or gas on State land at $20,000. The contract in each case calls for completion of a well within one year. The comissioners have authorized the advertising for sale of oil and gas leases to the northeast quarter of Section 36-23n-5e, Pawnee County and Section 16-3n-10w, Comanche County.

Are Your Wells Slowing Down?

Give them a new lease of life. Bring them back to normal with a

Standlee Swivel Swab

Some users tell us they are swabbing declining wells and bringing them back with the Standlee.

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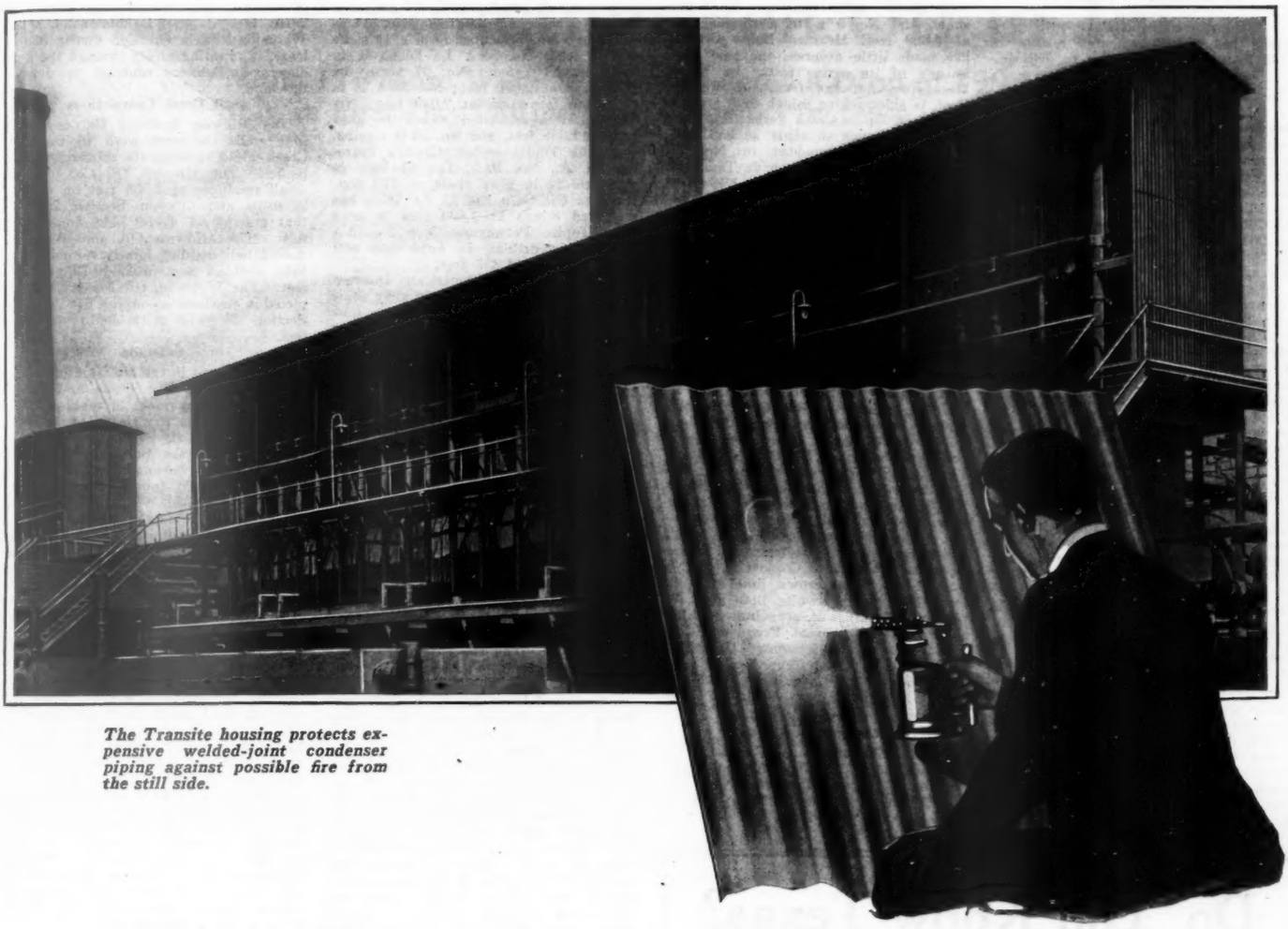

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FIRE, weather, and time have little effect upon Transite Corrugated Asbestos Roofing and Siding—hence it is an ideal fire barrier where oil industry equipment should be protected. Use it for housings, walls and roofing around aerial condensers, tanks, rundown lines, and other vital points where the spread of fire would do serious damage.

Use it also as a permanent non-rust roofing and siding for regular building construction. It is not only more fire-safe but costs less per year than roofings which require upkeep.

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FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE

Oil Industry Department

MEXICAN FIELDS

(Continued from Page 48)

barena has tested cemented 8-inch at 1,195 feet, and is resuming to drill in.

Cacalilao

In the Cacalilao sector of the northern fields, operations follow: La Corona Petroleum Co.'s No. 155, Lot 4, has cemented 8-inch in the San Felipe at 1,100 feet, and its No. 156 is drilling in the San Felipe at 1,400 feet. International Petroleum Co.'s operations in Lot 5: No. 131 is in gray shale at 1,425 feet; No. 200 is in gray lime at 1,785 feet; No. 201 is in the same formation at 1,945 feet; No. 205 is testing cemented 8-inch at 1,200 feet to resume; No. 207 is in gray lime at 1,675 feet; No. 208 cemented 6-inch at 1,205 feet in the San Felipe; No. 209 has done the same thing with 8-inch at 1,205 feet; No. 210 is drilling in gray lime at 1,767 feet; No. 214 is in shells at 1,132 feet; No. 216 cemented 8-inch in the San Felipe at 1,210 feet; No. 218 is in gray shale at 565 feet; No. 219 is spudded; No. 220 is in gray shale at 265 feet. Mexican Sinclair Petroleum Corp.'s No. 77, Lot 2 Cacalilao, cemented 8-inch in the San Felipe at 1,145 feet. Transcontinental Petroleum Co.'s operations in Lot 4: No. 141 cemented 10-inch in the San Felipe at 1,200 feet; No. 181 is in gray lime at 1,755 feet; No. 182 is in shale at 975 feet; No. 199 is in gray lime at 1,575 feet; No. 202 is in shale at 700 feet; and in the Paciencia, just north of Cacalilao, Transcontinental's No. 19 is in gray lime at 1,770 feet; No. 24 is in a lime at 2,000 feet, and No. 32 is in shale at 375 feet.

Southern Fields

In the south fields, there is but little change and not much activity to record. Huasteca Petroleum Co.'s No. 64 Cerro Azul is in brown lime at 2,265 feet and is due to be finished with any screw. Down in Tierra Blanca, its No. 47 is in brown lime at 2,220 feet; No. 50 is in gray shale at 2,040 feet; No. 51 is in the same formation at 340 feet. Up in Tres Hermanos, Huasteca's No. 7 is a deep test at 4,788 feet in a hard blue shale, and No. 9 is in a conglomerate at 4,360 feet. Mexican Eagle Oil Co. has made little progress the past week in any of its active tests; its No. 2 Mecapepec, not far from the Furbero Pool, is sidetracking 4-inch drill stem at 3,457 feet. Up in Cerro Veijo, its No. 21 cemented 10-inch in shale at 935 feet; and at Furbero, spudded in No. 35. Agwi Co.'s No. 40 Laguna de Tamiahua is fishing parted 12½-inch at 1,460 feet. Otontepec Petroleum Co.'s No. 2, Lot 191 Amatlan, has 8-inch frozen in trying to seat it at 1,940 feet, hard gray shale. Penn Mex Fuel Co.'s No. 2 Paso Real cemented 8-inch at 2,205 feet in hard gray shale; and No. 3 La Pita, a wildcat, drilling west of anything attempted near the Tuxpam River, is around 500 feet, presumably in shale.

Corcovado

In the Corcovado secfor of the northern fields, Cosmos Oil Co.'s No. 57, Lot G, is in gray lime at 1,615 feet, and its No. 111, same, cemented 8-inch in blue shale at 1,300 feet. La Corona Petroleum Co.'s No. 12, Lot 6, cemented 8-inch in the San Felipe at 1,100 feet, and No. 13, same, likewise with 10-inch at 600 feet. Internaional Petroleum Co.'s No. 8, Lot 6, has spudded, and its No. 9 is rigging. Mexican Gulf Oil Co.'s No. 45, Lot 4, has shut down for orders in brown and gray lime at 1,481 feet; and in the Chapacao, just above Corcovado, its No. 7 is in gray and brown lime at 1,980 feet; No. 8 is in white lime at 2,160 feet and No. 10 is in gray lime at 1,200 feet. Transcontinental Petroleum Co.'s No. 15, Lot 6, has cemented 10-inch in gray shale at 1,360 feet; No. 16 is in gray lime at 2,310 feet and No. 17 cemented 8-inch in gray shale at 1,250 feet.

Northern Miscellany

Among the miscellaneous tests in the northern fields consider the following: At Ebano, Mexican Petroleum Co.'s No. 11 Chapacao is running 12½-inch at 1,240 feet in gray lime; No. 20 is in the Tamasopa at 2,228 feet; No. 38 is in pink shale at 160 feet; No. 33 Chijol is in white shale at 430 feet; No. 34 is spudding; No. 7 Mendez is in gray shale at 445 feet; No. 39-A La Dicha is in shells at 1,100 feet; No. 57 is in the Tamasopa at 2,090 feet; No. 58-A is in the same formation at 2,045 feet; No. 9-A La Pez cemented 8-inch in gray lime at 1,398 feet, and No. 10 is rigging.

In the Topila sector, Credito Petrolero, S. A., No. 10-A, Lot 43 Pac. de Aguacate is in gray shale at 720 feet. Ita Mex Oil Co.'s No. 15 La Mula has cemented 8-inch at 1,664 feet in gray lime. Topila Petroleum Co.'s No. 3-A Ramirez is drilling in hard and soft shale layers at 1,232 feet.

In Los Esteros, American International Fuel Co.'s No. 11 is in gray shale at 3,774 feet; No. 17 is in white lime at 2,088 feet, and No. 19 is in the same formation at 1,665 feet.

Down in Tanceme, south of Panuco and Topila, International Fuel Co.'s No. 1 is in gray shale at 3,605 feet.

In the Chapacao right-of-way of the National Lines, the latter's No. 13 is in gray lime at 1,680 feet; No. 14 is in the Tamasopa at 2,247 feet, and No. 16 is in gray shale at 110 feet.

In Caracol, Venable and others' No. 26 is in gray lime at 2,640 feet.

ROCKY MOUNTAIN AREA

(Continued from Page 44)

Salt Creek area and lay in situ as an oil bearing sand. Then the erosion cut through this stone leaving it as an escarpment and forming the great cliffs of Castle Rock on the east side of the field. Teapot Dome, however, was lower, structurally, than Salt Creek proper and the erosion did not cut down on Teapot Dome to the Shannon sand, so that today it lies in situ about 500 to 900 feet below the surface on Teapot.

The faulted condition of the Teapot Dome has caused the trapping of bodies of oil in the Shannon sand between the faults and the east side of the dome offers what appear to be good prospects for a shallow sand development in the Shannon sand. This is further enhanced by the strike of the Burke well, though that well is hardly a good test because of its being drilled to considerable depth below the producing horizon. The west side of Teapot Dome has a sharp pitch in the dip that runs as high as 24 degrees so that it is not regarded as prospective territory for the Shannon. The east side, however, has an easy slope of about 8 or 10 degrees.

La Barge Producer

The Wyotah Oil Co., drilling in the La Barge Field in Lincoln County, in the southwest part of Wyoming, has a second producer in the shallow area. This new well found the oil at 620 feet while the first well found production at 590 feet. There is a lack of tankage in the field to make an adequate test of production, but the new well is conservatively estimated at 200 bbls. Owing to there being no pipe line, the wells in La Barge have been shut in as they are drilled and so far only guesses have been made as to the real productiveness of the pool. The field lies about 30 miles from the nearest point on the railroad. The oil is probably the highest grade crude found in Wyoming.

The Midwest Refining Co. drilled a deep test in the La Barge Field for the Utah Oil & Refining Co. and called it a dry hole after going about 4,000 feet. This well is now to be plugged back to a showing that was found at 1,920 feet and a test made to see if this showing would make a commercial well.

In the Rawlins and Lost Soldier district in southern Wyoming, the Producers and Refiners, drilling a wildcat in Crooks Gap of the Ferris Mountains, has a showing of oil at 2,520 feet. This showing was found in the Frontier sands which correspond to the Wall Creek sands of Salt Creek. The objective of the well is the Dakota formation expected around 3,500 feet.

The No. 7 well of the Producers & Refiners on the lease of the Wyoming-Illinois Petroleum Co. in the Lost Soldier Field, Section 11-26-90, came in the past week good for an estimated production of 300 bbls. from a depth of 2,040 feet in the Dakota sand. The Wyoming-Illinois Oil Co., owner of the lease, is profiting nicely through the Producers & Refiners contract to develop the land.

Salt Creek Completions

The Midwest Refining Co. completed four wells the past week in the Salt Creek Field through its subsidiary companies. The Midwest Oil Co. found a small producer at 1,555 feet on Section 27-40-79 and one on Section 26-40-79 that started off at 50 bbls. from 1,125 feet. The Midwest Oil and Wyoming Associated, drilling jointly, found a 40-bbls. well on Section 25-40-79 at 1,631 feet. The Wyoming Oil Fields Co. completed a producer good for 578 bbls. on Section 24-40-79 at a depth of 1,190 feet.

Colorado

The new well in the Moffat Field, Colorado, drilled by The Texas and Transcontinental companies, is making 2,350 bbls. daily. The Prairie Oil & Gas Co. has abandoned its wildcat test in the Red Desert on the Buffalo Basin Dome with the hole bottomed at 1,745 feet. The Ohio Oil Co. found a duster in the Lance Creek Field, Section 5-36-65, having drilled to a depth of 3,496 feet.

The Union Oil Co. of California, through its subsidiary, the Fort Collins Producing Co., has purchased a tract in the northwest corner of Section 6-9-68 in the Fort Collins Field to be used as a site for a gasoline plant. This plant is to cost upwards of $100,000 and will be an absorption one. Completion is expected this coming fall. Fort Collins city is making an effort to obtain the gas for domestic use after the absorption plant has finished with same.

It is announced in Casper that the North & South Railroad from Casper to the Salt Creek Field has been bought in by the contractors who helped build it and who held liens against the road for over $1,000,000. The road was built by the Middle States Oil Corp. and was originally intended to extend from Casper to a connection with the Chicago, Milwaukee & St. Paul in Montana. It was completed to Salt Creek and is operating between Casper and Salt Creek Field under a receivership.

The meeting of the Petroleum Division of the American Institute of Mining Engineers, to be held in Casper, August 28 to 30 inclusive, is attracting attention, and the oil men at Casper are preparing to welcome the visitors. The program will take the first day for the business meeting and technical papers; the second day will be spent in Salt Creek and at Teapot Dome; the third day the members will travel south to Rawlins, passing through the Ferris Mountains and the Lost Soldier Field, and from Rawlins they will take the Union Pacific trains to their homes.

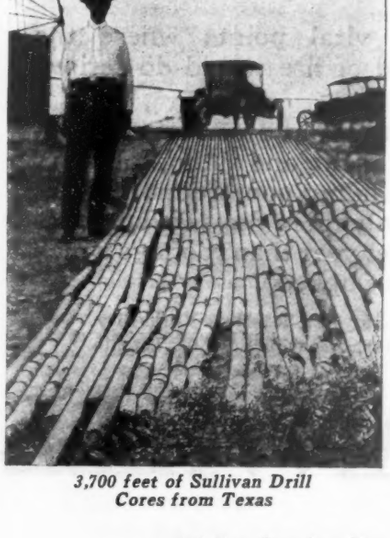
Parco, the producers and refiners town on the Union Pacific, is making great preparations for the official opening and lot sale to be held Augusst 6, 7, and 8. The main buildings in the business portion of the town are all finished, including the railroad station, and the landing field for the airplanes that are to race from Denver is ready.

Rocky Mountain Fields

Daily Average Pipe Line Runs for the Week

Salt Creek	57,100
Teapot	1,640
Big Muddy	3,520
Grass Creek	4,280
Elk Basin	830
Greybull	20
Rock Creek	3,000
Notches	310
Rex Lake	430
Lance Creek	720
Polson Spider	960
Osage	350
Hamilton Dome	680
Mule Creek	750
Lander	280
Byron	50
Pilot Butte	180
Lost Soldier	5,510
Ferris	90
Cat Creek, Mont.	3,450
Sunburst, Mont.	8,700
Florence, Colo.	260
Moffat (Craig), Colo.	690
Fort Collins, Colo.	1,240
Tow Creek, Colo.	120
Boulder, Colo.	25
Rangeley, Colo.	100
Hogback, N. M.	530
Rattlesnake, N. M.	460
Artesia, N. M.	1,700
Total	97,315

Do You Know Texas?



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will enable you to find out surely, most quickly and at least cost, whether your part of Texas, or any other State, has oil in it. The cores from a continuous geological record.

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Sullivan Machinery Company

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Initial Production Fell Off in July

While 176 More Wells Were Completed a Drop of 199,320 Bbls. in First Day Output is Recorded. Increase in Drilling

SUMMARY OF ALL FIELDS

Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Eastern	444	1,707	57	91
Lima	58	616	10	0
Indiana	16	178	6	1
Central Ohio	39	155	14	15
Illinois	24	821	6	1
Kentucky	141	1,059	36	11
Tennessee	0	0	0	0
Kansas	255	25,919	70	6
Oklahoma	540	67,940	152	40
North Central Texas	364	24,083	140	9
East Central Texas.	32	1,981	5	1
North Louisiana	29	836	13	4
Arkansas	209	165,584	12	17
Gulf Coast	95	40,094	30	1
Southwest Texas	110	12,388	23	4
Wyoming	64	5,295	6	3
Montana	46	5,515	11	3
Colorado	10	2,050	7	1
New Mexico	26	1,985	6	0
Total July	2,502	358,203	605	208
Total June	2,326	*557,523	550	189
Difference	176	199,320	56	19

*Revised.

Rigs and Wells Drilling

Field—	Rigs	Drg.	Total
Eastern	165	460	625
Lima	5	78	83
Indiana	1	24	25
Central Ohio	28	70	98
Illinois	2	37	39
Kentucky	18	265	283
Tennessee	7	27	34
Mississippi	2	10	12
Alabama	1	9	10
Georgia	1	4	5
Kansas	96	394	490
Oklahoma	214	1,214	1,428
North Central Texas	77	408	485
East Central Texas	10	69	79
North Louisiana	36	80	116
Arkansas	83	369	452
Gulf Coast	62	165	227
Southwest Texas	36	112	148
Wyoming	88	341	429
Montana	25	133	158
Colorado	18	88	106
Utah	3	28	31
New Mexico	13	92	105
Total July	991	4,477	5,468
Total June	1,097	4,248	5,345
Difference	106	229	123

While field operations in July showed an increase of 176 in the number of completions in fields east of the Rocky Mountains, the initial production fell off 199,320 bbls., as compared with June. The drop in initial production in Arkansas was greatest of all. In new work a falling off of 106 in rigs but an increase of 229 in wells drilling was shown, a net gain over June of 123.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	168	11,984	41	5
Tulsa	41	576	11	6
Washington	9	51	1	0
Okmulgee	55	6,486	19	3
Seminole	30	4,449	9	0
Okfuskee	23	3,673	7	3
Hughes and McIntosh	31	6,422	8	2
Muskogee and Wagoner	5	5	4	0
Creek	37	2,583	12	8
Pawnee	17	2,287	6	0
Kay	18	19,035	3	3
Payne and Lincoln	17	4,156	6	2
Garfield and Noble	17	4,037	6	1
Stephens and Cotton	20	515	7	2
Carter	26	1,229	10	0
Miscellaneous	26	452	8	5
Total July	540	67,940	152	40
Total June	464	75,671	140	30
Difference	76	7,731	12	10

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Osage	22	96	118
Tulsa	6	36	42
Okmulgee	22	90	112
Seminole	8	83	91
Okfuskee	12	69	81
Hughes and McIntosh	14	103	117
Muskogee and Wagoner	3	5	8
Creek	33	94	127
Pawnee	8	57	65
Kay	19	159	178
Payne and Lincoln	19	78	97
Garfield	8	97	105
Noble	3	32	35
Stephens and Cotton	11	46	57
Carter	7	45	52
Miscellaneous	19	124	143
Total July	214	1,214	1,428
Total June	297	1,167	1,464
Difference	83	47	36

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Anderson	34	1,964	1	1
Butler	20	970	7	0
Chautauqua and Elk	29	1,316	9	2
Cowley	32	6,761	9	0
Greenwood	84	10,444	19	0
Montgomery	6	360	2	2
Russell	14	3,545	1	0
Wilson	11	0	11	0
Miscellaneous	25	560	11	1
Total July	255	25,919	70	6
Total June	151	21,089	55	3
Difference	104	4,830	15	3

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Butler	3	37	40
Chautauqua and Elk	8	20	28
Cowley	15	76	91
Greenwood	43	101	144
Montgomery	0	20	20
Russell	7	11	18
Sedgwick	2	7	9
Summer	1	18	19
Woodson	1	13	14
Miscellaneous	16	91	107
Total July	96	394	490
Total June	100	393	493
Difference	4	1	3

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Limestone-Freestone	2	0	2	0	3	11	14
Navarro	27	1,981	5	1	6	32	38
Miscellaneous	3	0	3	0	1	26	27
Total July	32	1,981	10	1	10	69	79
Total June	41	3,177	9	4	13	69	82
Difference	9	1,196	1	3	3	0	3

NORTH CENTRAL TEXAS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas
Wichita	69	2,436	22	0
Wilbarger	39	2,812	15	0
Archer	109	4,009	48	0
Young	46	3,654	22	0
Stephens	16	1,754	2	4
Eastland	16	993	3	2
Brown	22	1,640	7	0
Reagan	5	5,200	1	0
Wildcats	42	1,585	20	3
Total July	364	24,083	140	9
Total June	321	32,367	104	7
Difference	43	8,293	36	2

Summary of New Work

	Rigs	Wells Drlg.	Ttl.
Wichita	4	43	47
Wilbarger	7	50	57
Archer	4	80	84
Young	2	25	27
Stephens	14	43	57
Eastland	6	24	30
Brown	6	11	17
Reagan	13	23	36
Wildcats	21	109	130
Total July	77	408	485
Total June	65	352	417
Difference	12	56	68

NORTH LOUISIANA AND ARKANSAS

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union Co.	114	65,252	9	11	42	156	198
Ouachita Co.	87	104,232	5	6	27	161	188
Nevada	0	0	0	0	2	7	9
Stephens	0	0	0	0	1	3	4
Bellevue	0	0	0	0	0	4	4
Caddo	6	362	0	0	4	21	25
Cotton Valley	5	465	1	0	13	17	30
La. wildcats	18	9	12	4	19	38	57
Ark. wildcats	8	0	8	0	11	42	53
July	238	170,420	35	21	119	449	568
June	276	381,750*	34	8	124	472	596
Difference	37	211,330	1	13	5	23	28

*Revised.

GULF COAST

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	4	45	0	0	0	5	5
Blue Ridge	1	0	1	0	1	2	3
Big Creek	3	2,000	2	0	0	1	1
Edgerly (La.)	0	0	0	0	0	1	1
Goose Creek	5	485	1	0	4	7	11
Humble	3	95	0	0	2	5	7
Hull	15	4,775	2	0	1	18	19
High Island	3	0	3	0	0	5	5
Markham	1	7	0	0	0	4	4
Orange	12	13,175	1	0	6	13	19
Pierce Jct.	0	0	0	0	0	2	2
Spindletop	3	100	1	0	1	3	4
Saratoga	1	7	0	0	0	3	3
Sour Lake	1	450	0	0	1	6	7
South Liberty	21	14,350	3	0	3	13	16
Lockport (La.)	0	0	0	0	2	5	7
Vinton (La.)	5	4,605	0	0	0	7	7
West Colmbia	1	0	1	0	0	3	3
Miscellaneous	16	0	15	1	41	63	104
Total July	95	40,094	30	1	62	165	227
Total June	103	15,670	33	4	67	181	248
Difference	8	24,424	3	3	5	16	21

SOUTHWEST FIELDS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Luling	2	0	2	0	1	5	6
Laredo dists.	8	730	0	0	7	9	16
Somerset	3	18	1	0	0	2	2
Callihan	4	50	0	1	0	4	4
Rockdale-Minerva	19	395	4	0	3	9	12
Jim Hogg County	12	2,900	2	2	4	9	13
Lockhart	56	8,205	11	0	11	23	34
Miscellaneous	6	90	3	1	10	51	61
Total July	110	12,388	23	4	36	112	148
Total June	72	10,899	16	2	26	71	97
Difference	38	1,489	7	2	10	41	51

Grand Total

Gulf Coast	95	40,094	30	1	62	165	227
Southwest	110	12,388	23	4	36	112	148
Total July	205	52,482	53	5	98	277	375
Total June	175	26,569	49	6	93	252	345
Difference	30	25,913	4	1	5	25	30

WYOMING

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy	0	0	0	0	0	3	3
Salt Creek	51	4,505	1	0	63	123	186
Lance Creek	1	0	1	0	0	2	2
Big Horn Basin	6	390	1	2	3	57	60
Lost Soldier	3	0	2	1	3	33	36
Rock River	0	0	0	0	3	22	25
Fremont Co.	1	0	1	0	2	29	31
Osage	0	0	0	0	5	11	16
Natrona Co.	0	0	0	0	0	16	16
Lincoln County	2	400	0	0	4	13	17
Baxter Basin	0	0	0	0	1	5	6
Miscellaneous	0	0	0	0	4	27	31
Total July	64	5,295	6	3	88	341	429
Total June	82	3,361	9	7	123	303	426
Difference	18	1,934	3	4	35	38	3

MONTANA

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Sunburst	43	5,475	10	3	14	49	63
Cat Creek and miscellaneous	3	40	1	0	11	84	95
Total July	46	5,515	11	3	25	133	158
Total June	41	5,936	11	0	21	95	116
Difference	5	421	0	3	4	38	42

COLORADO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl
Total July	10	2,050	7	1	18	88	106
Total June	7	240	5	0	18	95	113
Difference	3	1,810	2	1	0	7	7

UTAH

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total July	0	0	0	0	3	28	31
Total Jun	0	0	0	0	1	29	30
Difference	0	0	0	0	2	1	1

NEW MEXICO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total July	26	1,985	6	0	13	92	105
Total June	10	1,225	2	0	5	80	85
Difference	16	760	4	0	8	12	20

EASTERN FIELDS

Summary of Completed Work

Fields—	Comp.	Prod.	Dry	Gas
Allegany	27	45	0	0
Bradford	104	256	2	0
Middle Field	13	25	3	4
Venango-Clarion	49	68	5	1
Butler-Armstrong	17	16	3	5
Southwest Pennsylvania	12	2	0	11
West Virginia	111	465	22	54
Southeast Ohio	111	830	22	16
Total July	444	1,707	57	91
Total June	436	2,225	51	95
Difference	8	518	6	4

Summary of Rigs and Wells Drilling

Fields—	Rigs	Drg.	Ttl.
Allegany	16	15	31
Bradford	20	94	114
Middle Field	1	7	8
Venango-Clarion	3	30	33
Butler-Armstrong	10	24	34
Southwest Pennsylvania	13	27	40
West Virginia	61	150	211
Southeast Ohio	41	113	154
Total July 31	165	460	625
Total June 30	159	473	632
Difference	6	13	7

S. W. PENN., WEST VIRGINIA, S. E. OHIO

Summary of Completed Work

Fields—	Comp.	Prod.	Dry	Gas
Southwest Pennsylvania	12	2	0	11
West Virginia	111	465	22	54
Southeast Ohio	111	830	22	16
Total July	234	1,297	44	81
Total June	233	1,799	42	81
Difference	1	502	2	0

Rigs and Wells Drilling

	Rigs	Drg.	Ttl.
Southwest Pennsylvania	13	27	40
West Virginia	61	150	211
Southeast Ohio	41	113	154
Total July	115	290	405
Total June	104	294	398
Difference	11	4	7

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Fairfield	0	0	0	0	1	0	1
Ashland	1	0	0	1	4	12	16
Medina	6	11	2	1	2	10	12
Lorain	7	10	1	5	4	9	13
Wayne	3	0	2	1	1	9	10
Richland	0	0	0	0	0	1	1
Vinton	1	0	1	0	0	0	0
Holmes	11	134	4	1	10	17	27
Jackson	0	0	0	0	4	1	5
Athens	6	0	2	4	2	10	12
Huron	1	0	1	0	0	0	0
Coshocton	2	0	0	2	0	0	0
Summitt	1	0	1	0	0	0	0
Ross	0	0	0	0	0	1	1
Total July	39	155	14	15	28	70	98
Total June	27	40	9	16	30	62	92
Difference	12	115	5	1	2	8	6

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	11	39	4	0	0	12	12
Hancock	7	59	0	0	2	6	8
Allen	6	44	0	0	0	8	8
Auglaize	5	46	1	0	0	7	7
Sandusky	6	30	0	0	0	3	3
Mercer	8	72	2	0	0	11	11
Van Wert	1	10	0	0	2	4	6
Seneca	1	0	1	0	0	1	1
Lucas	1	12	0	0	0	1	1
Ottawa	1	8	0	0	1	2	3
Darke	1	0	1	0	0	2	2
Shelby	5	139	0	0	0	6	6
Hardin	2	40	1	0	0	4	4
Paulding	3	67	0	0	0	7	7
Defiance	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Michigan	0	0	0	0	0	2	2
Total July	58	616	10	0	5	78	83
Total June	83	974	9	4	6	81	87
Difference	25	358	1	4	1	3	4

ILLINOIS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	7	271	0	0	0	15	15
Crawford	5	95	1	1	0	5	5
Lawrence	4	185	0	0	0	4	4
Marion	1	40	0	0	0	2	2
Wabash	6	230	4	0	0	2	2
Douglas	0	0	0	0	0	2	2
Coles	1	0	1	0	0	1	1
Union	0	0	0	0	0	1	1
Edwards	0	0	0	0	1	0	1
McDonough	0	0	0	0	0	1	1
Fayette	0	0	0	0	1	1	2
Jackson	0	0	0	0	0	5	5
Total July	24	821	6	1	2	37	39
Total June	24	382	7	0	6	34	40
Difference	0	439	1	1	4	3	1

INDIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Blackford	0	0	0	0	0	1	1
Jay	7	40	3	0	0	1	1
Adams	0	0	0	0	0	1	1
Delaware	1	0	1	0	0	2	2
Randolph	0	0	0	0	1	0	1
Gibson	2	30	0	0	0	3	3
Pike	2	10	1	0	0	2	2
Allen	1	25	0	0	0	4	4
Sullivan	2	0	1	1	0	5	5
Hendricks	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Spencer	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Daviess	1	70	0	0	0	0	0
Total July	16	175	6	1	1	24	25
Total June	17	139	6	0	5	23	28
Difference	1	36	0	1	4	1	3

KENTUCKY, TENNESSEE, MISSISSIPPI, ALABAMA AND GEORGIA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	19	117	7	0	1	39	40
Allen	23	106	9	0	2	21	23
Barren	44	268	12	0	1	46	47
Owensboro	13	204	3	0	2	24	26
Cumberland-Monroe	7	175	0	0	0	17	17
Hopkins	0	0	0	0	0	3	3
Grayson	0	0	0	0	0	2	2
Russell	0	0	0	0	0	2	2
Logan	1	6	0	0	0	1	1
Simpson	0	0	0	0	0	3	3
Metcalf	1	15	0	0	1	0	1
Meade	0	0	0	0	0	1	1
Adair	0	0	0	0	3	0	3
Wayne	6	36	2	0	0	18	18
Wolfe	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	1	1
Clay	3	0	1	2	0	0	0
Boyd	1	20	0	0	0	1	1
McCreary	0	0	0	0	0	2	2
Estill	0	0	0	0	0	1	1
Breathitt	0	0	0	0	1	1	2
Lee-Owsley	5	30	0	2	0	13	13
Lawrence-Johnson	3	58	0	0	3	17	20
Magoffin	7	19	2	0	2	27	29
Floyd	5	0	0	5	0	13	13
Greenup	0	0	0	0	2	5	7
Martin	2	0	0	2	0	2	2
Morgan	1	5	0	0	0	4	4
Kentucky	141	1,059	36	11	18	265	283
Tennessee	0	0	0	0	7	27	34
Mississippi	1	0	1	0	2	10	12
Alabama	0	0	0	0	1	9	10
Georgia	0	0	0	0	1	4	5
Total July	142	1,059	37	11	29	315	344
Total June	172	2,395	50	9	31	268	299
Difference	30	1,336	13	2	2	47	45

CALIFORNIA

(Continued from Page 46)

good for 165 bbls. of 32.8 gravity oil from 3,890 feet. The Chanslor-Canfield Midway Oil Co.'s No. 1 Bilhorn, drilling to the north of the field, is going ahead at 5,454 feet in a hard gray sand but has not yet found anything of importance. The Superior Oil Co. is not having very much success in its attempt to develop production in the deep sand underlying its Maxwell lease in the southern part of the field. No. 2 swabbed a little oil and water from 6,027 feet but will not result in production in its present condition. The Burnham Exploration Co.'s No. 2 Wagner, an outpost northwest of the field, is going ahead in a gray sand at 3,800 feet.

Dominguez

The Marland Oil Co. secured an okeh from the State Mining Bureau on the water shut off in its deep test, No. 7, in the Dominguez Field, and it looks as though the company may be in a position to make a production test within a short time. The company will continue to make further tests of the water and will drill a little more hole before trying for production. The Union finished drilling No. 12 Callender at 4,719 feet and completed a 1,182-bbl. well, the oil being clean and testing 30.8 degrees. It is flowing through a ⅞-inch bean under a pressure of 310 pounds. The company is making preparations to swab in No. 11 Hellman, drilled to 4,154 feet and finished with a 6¼-inch oil string. but the outlook is for only a small well at the best. The Shell has reduced its drilling program in this field to two holes, No. 27 A. Reyes at 1,110 feet, and No. 29 Reyes, now at 3,400 feet. The United Oil Co. put No. 5 Dominguez on the beam at 4,200 feet after plugging back from 4,225 feet, but the maximum output did not exceed 50 bbls. a day. This should prove an excellent proposition for some class in mathehatics to compute how long it will take to pay out.

Torrance

Two exceedingly small wells were put on the beam at Torrance during the week, one a work-over. The latter was No. 4 Interstate, of the Standard, put on the pump after being cleaned out to bottom, 3,879 feet. The initial pumping was 26 bbls. of 15.2 gravity oil which cut 4 per cent. A core taken in No. 2 Ellinwood, the company's outpost in the southwestern part of the fiield, at 4,598 feet, showed the formation to be a hard sand streaked with shale. This rather deep hole does not look any too encouraging for production. The Superior's No. 36 Torrance pumped 10 bbls. upon completion, the oil testing 15.3 degrees and showing a cut of 4 per cent. The hole was drilled to 3,800 feet and finished with a 6¼-inch oil string including 275 feet of 60-mesh screen. The Chanslor-Canfield Midway Oil Co. is running the oil string in No. 37 Del Amo, a new well finished at 3,685 feet, and will probably be in a position to make a test within the next week or 10 days. In addition to this driller, the company has No. 34 Del Amo at 3,300 feet, No. 69 at 1,932 feet, No. 81 at 2,180 feet, No. 105 at 3,538 feet and No. 106 at 2,922 feet, all of which are in proven territory and look good for small production.

Long Beach

The Richmond Oil Co. finished its first successful completion at Long Beach after going to 4,588 feet and completing the hole with a 4¾-inch oil string, including 438 feet of shop perforated. The well has not yet cleaned up and got under way but it looks good for 250 bbls. of 21.5 gravity oil. The United is still held up with water trouble in No. 2-A Bixby at 4,430 feet and it looks as though the company has quite a job on its hands if clean production is to be secured.

Huntington Beach

The Standard secured a fairly good looking showing in No. 21 Bolsa Chica at Huntington Beach between 4,035 feet and 4,040 feet. The indications at this depth do not warrant production but they are considered quite favorable and a test will be made if they continue for any appreciable depth. No. 18 Bolsa Chica, the company's deep test in the northwestern section of the field, is held up at 5,813 feet with a fish in the hole and the prospect of a complete recovery quite doubtful. The Standard has several drillers on both Leases A and B but progress has been rather slow during the past few months due to mechanical trouble and the shifting of crews from this field to Inglewood.

Midway-Sunset

The Federal Drilling Co.'s big well in Section 20-31-24, finished a month or two ago, sanded up during the early part of the week and the company will clean out the hole and attempt to bring it back. Should the gas pressure be insufficient or sand trouble prevent its return to production under a natural flow it will be put on the beam. When originally completed, this well was good for around 1,500 bbls. a day and the big production derived resulted in considerable offsetting and nearby drilling. No. 2 on this lease is not showing up as well as anticipated as it has been off and on production at different intervals. It looks now as though it will be necessary to put it on the beam at 4,944 feet is a consistent producer is desired. No. 3 is standing cemented at 5,017 feet and will probably be drilled out within the next week or 10 days. Nos. 4, 11 and 21 have been standing rigged up for some time but actual drilling will be held up pending the outcome of Nos. 1, 2 and 3. The Pacific finished its No. 21 on Section 20-31-24, an offset to the Federal Drilling Co.'s No. 1 on Section 20-31-24, which just sanded up. The Pacific's hole, which was carried down to 4,745 feet and finished with a 6¼-inch oil string landed at 4,730 feet, was somewhat shallower than its offset. The company started bailing late in the week but the well has not yet responded and it will probably be several days before it is actually tanking oil, as it takes some time to exhaust the sand production. The Pacific has four other drillers on this property and should finish Nos. 17, 19, 22 and 47 within a short time as they are all below 4,100 feet at present. The Southwest Petroleum is abandoning its No. 2 on Section 28-31-24 as a duster and, although one or two small showings were noted, they were insignificant. This, together with a troublesome water condition, rendered further drilling useless.

The Mascot Oil Co. was not successful in developing commercial production in its No. 4 on Section 36-32-23, in the Hovey Hills, at 3,670 feet, and will accordingly plug back by stages in the hope of securing shallow production. The Formax is building a rig on this same section for its well No. 21 and will probably start operations within two weeks. The General Petroleum finished No. 11 Buena Vista at 4,002 feet and brought in a 280-bbl. pumper, the oil testing 25.2 degrees and showing a cut of 2 per cent. The completion of this hole leaves the company with two drillers on Section 35, No. 276-B at 2,276 feet, and No. 379 at 1,700 feet.

Wheeler Ridge

The Wheeler Ridge Field in the southern extremity of the San Joaquin Valley, has fallen far below expectations and recent developments tend to indicate that future drilling will be somewhat limited. The last well completed by the Standard on Section 28-11-20 was No. 18, which came in from 2,431 feet good for about 10 bbls. of oil cutting approximately 15 per cent water. This was quite a disappointment and the rig which had been erected nearby for No. 16 is scheduled for removal and the location abandoned. No. 19 is drilling ahead and making hole at 1,500 feet. No. 20 has been standing rigged up for some time but it is not known whether the rig will be used or not. Nos. 10 and 11 recently proved unproductive in the deep zone and are being plugged back for shallow production. The General Petroleum is apparently also disappointed with the outcome of its work in this area, as No. 4 on Section 28-11-20 has been standing suspended at 2,005 feet for several months. The Standard finished a small unsatisfactory pumper at Elk Hills on Section 31-30-25 when No. 23 was put on the beam at 3,261 feet. The maximum output was 25 bbls. of oil and 75 bbls. of water. The company has two holes on Section 36-30-24, No. 24, which is standing cemented at 3,226 feet, and No. 44, drilling ahead at 1,996 feet. The Pan-American is making a water test in No. 4 on Lease B at 3,460 feet, and in No. 5 on Lease I at 3,060 feet. The Union is just drilling out the cement in its No. 11 on Section 26-30-24 and will resume drilling at 3,365 feet.

Seal Beach

No. 2 Bryant of the Shell at Seal Beach is standing recemented at 5,098 feet, following an unsuccessful water shut off on the 8¼-inch at 5,042 feet. If this job is effective the company will resume drilling and find out how much sand there is present and whether it warrants further work. No. 1 Bryant, the Shell's discovery well, which has been producing a little oil for several months, is at present making 50 bbls. of oil and 1,750 bbls. of water, just enough to keep the boilers going. This well resulted in the leasing of the Hellman property to the Associated some five or six months ago on a 110 per cent basis. The Associated's initial test, No. 1 Hellman, has just passed the 4,900-foot level and is going ahead in a tough sticky shale. This hole appears to be off structure and the best that can be expected as a deep edge well. It is reported the Marland Oil Co. will start work within 10 days on a test northwest of the Shell's holdings. Present developments do not warrant further work but the Marland is required by drilling obligations to spud soon or relinquish its holdings. For this reason it is quite possible the company will merely make a technical spud, although this could not be verified at present. H. L. Whiston ran into a sticky shale in his Montebello extension, No. 1 Bicknell, at 4,757 feet. This wildcat has only a small chance of developing production, although the change from sandy shale just made is quite welcome and will revive interest in the test. In the Montebello Field proper, the McGinley Oil Co. is making preparations to bring in No. 20 from 3,605 feet. The oil string, including 400 feet of perforated, has already been landed and the hole should be bailed within a day or two. The St. Helens Petroleum should also finish a new well at Montebello, as both No. 2 Mulholland and No. 9 Monterey are in the oil sand. Drilling was stopped in the latter at 3,542 feet and a string of 8¼-inch will be run in. The Pan-American is still held up with mechanical trouble in No. 1 Jesurum in the Rideout Heights section of the Whittier Field, at 1,325 feet, no further work has been done on No. 1 Witte, suspended some time ago at 4,682 feet.

Richfield

The Chicksan Oil Co.'s No. 3 Bradford in the Richfield district is looking unusually well at 5,078 feet, having passed through about 300 feet of oil sand. This penetration is nearly twice as much as that made in either No. 1 or No. 2, and for this reason, No. 3 is expected to be an excellent well upon completion within two or three weeks. The General Petroleum is running a string of 6¼-inch in No. 6 Thompson at 3,805 feet and is scheduled to make a production test next week. The Union has two fishing jobs on its hands at Fullerton, as some 6-inch drill pipe has been lost in both its wildcats, No. 1 Olinda at 2,835 feet, and No. 2 Olinda at 2,487 feet. The Brea Canyon Oil Co. is drilling ahead in a very promising looking oil sand at 4,005 feet, and this driller, No. 37, looks good for early production. The Chanslor-Canfield Midway Oil Co. did not secure a water shut off in No. 96 Olinda at 3,600 feet and the hole has been recemented. Drilling has been resumed on No. 98 Olinda and the bit is going ahead at 650 feet. The Fullerton Oil Co. has not yet picked up the oil sand in No. 19, although 4,577 feet of hole has been made to date. The present formation is a very hard sand but a change is expected shortly. There were no favorable developments of importance in the Newport area, as work is going on rather slowly following the set back received several weeks ago when the best well in the field suddenly turned to water. A. T. Jergins carried down the Vista Del Mar's No. 1 Mesa to 1,004 feet but pulled out when nothing worth while was picked up. J. M. Nelson suspended work on his test at 800 feet as he considered further drilling useless. Several other Newport operators, however, formed a pool and will carry this test down to around 1,000 feet, hoping to prove up their own holdings at a minimum expense. The Empire Drilling Co. has reached a depth of 2,440 feet in No. 1 Rowntree and is going ahead in a sandy brown shale.

Southern California Wildcats

The Associated reports a hard sandy shale in its Beverly Hills deep test, No. 101 Fox Hills, at 4,735 feet, and will continue drilling until the 5,000-foot level is reached at least. The Oak Ridge is making hole in No. 1 Couts at Bandini in a brown shale at 2,237 feet, while the Superior is going ahead in No. 1 Vail at 650 feet. The Midway Gas Co. is temporarily held up with mechanical trouble in No. 1 Leuzinger in the Hawthorne area at 2,620 feet. The company had expected to develop shallow gas production but will carry the hole down to around 3,000 feet if the fish is recovered. The Shell is down 5,700 feet in No. 1 Stubbs at La Mirada, and since the entire hole has been devoid of showings of any kind, an abandonment will be in order soon. The Associated is still held up in No. 1 Newhall in the Saugus area with mechanical trouble at 5,014 feet. The Union's test in this area is also being delayed but drilling should be resumed as soon as the 10-inch has been swedged out satisfactorily. The Pan-American Petroleum is drilling ahead in No. 1 Crest at Palms in a gray sand at 3,498 feet, and while this wildcat has not shown anything to date, it may prove up better later on. The Milham Exploration Co. is landing a string of 11-inch in its Playa Del Rey wildcat at 3,884 feet. The pipe is being landed for protection purposes only and not as the result of any favorable showings. The Union is getting ready to abandon its Ocean Park Heights wildcat, No. 1 Newlin, at 5,878 feet. The hole did not even show a rainbow from top to bottom, and while this is the principal reason for the abandonment, a difficult fishing job was also a contributing factor. The Standard is still drilling ahead in No. 1 Hadley at Rivera, the log showing the formation to be a hard sandy lime at 5,854 feet. The company's No. 1 Schriltz at Santa Ana Gardens is going ahead in a dark gray sandy shale at 3,155 feet. The Calny Oil Co. is still working with its wildcat in the Irvine section, but has not yet found any favorable indications, notwithsanding 4,025 feet of hole has been made to date.

Northern California Wildcats

Another week has passed without the Chanslor-Canfield Midway Oil Co. resuming work on its Delano wildcat, which showed up rather favorably some few weeks ago around 3,770 feet. No reliable information is available as to when the company will drill out and make a production test but it will probably be soon. The Standard's test on Section 12-25-19, north of Lost Hills, is standing cemented at 2,190 feet but it is expected the company will get under way some time next week. The Barnsdall, out on the McKittrick front, Section 30-29-22, is drilling ahead in a sandy shale at 3,828 feet, while the Standard is making hole in its two tests, Nos. 1 and 3, at 2,800 feet and 2,200 feet respectively. On the Kern River front the Marland has a rig standing for No. 1 Cauley on Section 16-28-27, while the Standard is going ahead in a sandy blue shale at 2,590 feet on Section 21-28-27. No further developments materialized in the Wasco sector, as the Main Oil Co.'s potential gas well on Section 28-27-14, is still shut in. Several of the prospects in the Raisin City area are getting quite deep and, unless something develops very shortly, the territory will have very few inducements to offer future wildcatters. As a matter of fact,

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GREAT NORTHERN TOOL & SUPPLY COMPANY..Kevin, Mont.

conditions look far less promising today than 30 days ago. Both of the Associated's tests are deep, the one on Section 14-15-18 being reported at 5,397 feet and the one on Section 26-15-18 at 5,898 feet. The Fresno-United is reaming its 5,357-foot hole on Section 25-15-18. The Associated has just passed the 2,500-foot level in its Caruthers test, Section 15-16-19, and is making hole at Kerman, Section 35-13-26, in a hard sand at 3,996 feet.

The Kettleman Hills area experienced another rather inactive week, as both the General Petroleum and Marland are held up with mechanical trouble. The General Petroleum has a 2,650-foot hole in No. 1 Pezzoni in Stanta Barbara County, but is still looking for oil or gas showings. The Marland's Santa Barbara wildcat, Section 32-9-32, is in a hard brown shale at 2,450 feet. G. E. Becker cemented his hole at Summerland last week at 480 feet but is being delayed at present pending the arrival of additional drilling equipment. C. C. Julian is pulling out of the Half Moon Bay region in San Mateo County because of the very unfavorable outlook. There were four holes put down on the Cowell property but Julian was not successful in developing commercial production, notwithstanding the fact that one was drilled to 2,040 feet in comparatively shallow territory. E. J. Miley reports has No. 1 Smith in San Luis Obispo County at 1,978 feet, and the prevailing formation for the past 100 feet as a blue shale.

SMACKOVER PRODUCTION INCREASED BY BIG WELL

(Continued from Page 38)

at 2,607 feet. The Ohio Oil Co.'s No. 5 Goodwin, SE SW SE, Section 29-15-15, is setting 6⅝-inch casing at 2,580 feet. Simms Oil Co.'s No. A-5 Laney, NE SE NW, Section 31-15-15, cored oil sand at 2,597 feet, and was reaming to set casing. Murray & Bailey's No. B-3 Rhoten, SE SW SW NW, Section 32-15-15, is making 20,000,000 feet of gas and a spray of oil from sand at 2,564 to 2,588 feet. The Simms Oil Co.'s No. 9 Hildebrand, C NE SE SE, Section 28-15-15, was estimated at 20,000,000 feet of gas and is spraying oil from sand at 2,602-22 feet.

Deep Tests Close to Completion

The Humble Oil & Refining Co.'s No. 9 Laney, NW NE SE Section 31-15-15, sand at 2,575-85 feet, 2,000 feet of salt water in the hole after a test; Crosbie and others' No. A-6 Lawton, SE SE SW Section, 2,607-12 feet, estimated at 40,000,000 feet of gas with a heavy flow of salt water; Stock and others' No. 1 Ezell, SE SW NE Section 16-17-14, hole clean, reaming to set 5 3-16 casing at 2,861 feet; Standard Oil Co. of Louisiana's No. 7-B Murphy, SW SE SE SE Section 29-15-15, set 6-inch pipe at 2,587 feet; Ohio Oil Co.'s No. 5 Goodwin, SE SW SE Section 29-15-15, cored oil sand at 2,583 feet, arranging to set 6⅝-inch casing; Atlantic Oil Producing Co.'s No. 5 Berg, SE NE SE Section 30-15-15, set 6-inch casing at 2,602 feet; Sun Oil Co.'s No. 5 Johnson, SE SE Section 30-15-15, reaming to set 6⅝-inch casing at 2,602 feet; Simms Oil Co.'s No. 6 Hirsch, SE NE NE Section 31-15-15, set 6-inch pipe at 2,583 feet; Standard Oil Co. of Louisiana's No. 23 Umstead, NW SE Section 32-15-15, setting liner at 2,602 feet; Standard Oil Co. of Louisiana's No. 24 Umstead, NW NE SE Section 32-15-15, set 6-inch casing at 2,564 feet; Standard Oil Co. of Louisiana's No. 5 Powell, NW SE NW Section 34-15-15, drilling sand at 2,598 feet; Duho and others' No. A-1 McKenzie, SE NW NE Section 36-15-16, coring at 2,620 feet; Amerada Petroleum Corp.'s No. 10 Lyell, SE NE NW Section 3-16-15, setting 8¼-inch pipe at 2,523 feet; Magnolia Petroleum Co.'s No. 7 Goodwin, NE NW NW Section 5-16-15, blew in at 2,550 feet with the drill pipe in the hole, making about 40,000,000 feet of gas with showings of salt water; Amerada Petroleum Corp.'s No. 5 Giller, NW NE NE Section 15-16-15, cored at 2,510 feet; Empire Gas & Fuel Co.'s No. 5 Bradley, SE SW SE Section 30-15-15, filled up 500 feet with oil in one hour while swabbing to test sand at 2,594 to 2,603 feet; Atlantic Oil Producing Co.'s No. 5 Berg, SE NE SE Section 30-15-15, sand at 2,607-07 feet, tested salt water with a showing of oil; Natural Gas & Petroleum Co.'s No. 6 Laney, CNL NE NW Section 31-15-15, coring sand at 2,594 feet; Texas & Pacific Coal & Oil Co.'s No. 2 McCorvey, NW SW NW Section 32-15-15, sand at 2,582-88 feet, estimated at 15,000,000 feet of gas and 100 bbls. a day of oil, will deepen with cable tools after gas pressure lessens; Standard Oil Co. of Louisiana's No. 23 Umstead, NW SE Section 32-15-15, swabbed to top of liner and filled up 600 feet with oil, total depth 2,602 feet; Sinclair Oil & Gas Co.'s No. 11 Berry, CNL NE NW Section 33-15-15, set 6⅝-inch casing at 2,415 feet; Standard Oil Co. of Louisiana's No. 5 Powell, NW SE NW Section 34-15-15, arranging to test sand at 2,580-98 feet; Humble Oil & Refining Co.'s No. 6 Flannigan, NW cor. Lot 1, NE Section 6-16-15, sand at 2,562-69 feet, tested salt water and a show of oil; Crawford & Sebastian's No. 9 James, SW SE NW Section 5-16-15, tested a hole full of salt water at 2,564-67 feet; O. G. Murphy's No. 7 Murphy, SW SE Section 9-16-15, cored oil sand at 2,630 feet, reaming to set 6-inch casing at 2,626 feet.

GULF COAST

(Continued from Page 48)

abandoned at 1,100 feet. The Barclay Oil Co.'s No. 1 fee is a 5-bbl. well at 1,100 feet.

The Lake Graham Oil Co.'s No. 18 Bashara is drilling around 935 feet. The Lake View Oil Co.'s No. 6 Minor is around 2,910 feet. The Yount-Lee Oil Co.'s No. 4 Jackson and the Eagle Point Oil Co.'s No. 1 Jackson are both shut down.

Harris County Pools

In the Humble Pool, the Southern Petroleum Co.'s No. 45 Landslide is pumping 100 bbls. at 1,480 feet. Long and others' No. 3 Burt got salt water at 3,250 feet and is being deepened. The Texas Co. is drilling No. 19 House on the north side of the San Jacinto River on the north side of the pool.

At Pierce Junction, the Gulf Production Co.'s No. 17 Taylor is around 3,300 feet. The Rio Bravo Oil Co.'s No. 1 Settegast, on the northwest side, is drilling below 1,930 feet.

In the Goose Creek Pool, the Gulf Production Co.'s No. 31 Beaumont is pumping 150 bbls. at 2,800 feet. The Powell Oil Co.'s No. 6 Chapman is a salt water well at 4,410 feet.

The Gulf Production Co.'s No. 10 Chapman-Bryan is drilling around 4,223 feet. Nos. 11 and 31 State Land are deepening and No. 32 Beaumont is rigging. The Humble Oil & Refining Co.'s No. 63 Smith is drilling around 1,980 feet and No. 64 below 3,190 feet. No. 28 Galliard peninsula is drilling at 2,970 feet and No. 4 Harrell is at 3,476 feet. The Texas Exploration Co.'s No. 6 Freeman, in the bay, is around 2,335 feet. The La Rue Oil Co.'s No. 1 Dannebaum is working over at 1,290 feet. The Bruce Petroleum Co.'s No. 3 Scorrgea is drilling at 455 feet.

Fort Bend County Pools

At Big Creek, the Gulf Production Co.'s No. 23 Davis is drilling at 2,754 feet.

At Blue Ridge, The Texas Co.'s No. 13 Robinson is drilling below 3,376 feet and the Gulf Production Co.'s No. 12-C Blakely is at 1,370 feet.

Other Pools

In the West Columbia Pool, the Humble Oil & Refining Co.'s No. 14 Tyndale-Wyoming will make a pumper at 2,750 feet. The Hyde Production Co.'s No. 1 Lee is bailing at 2,200 feet.

The Humble Co.'s No. 2 Wilson is fishing at 3,690 feet.

At High Island, the Sun Oil Co.'s No. 9 Cade was abandoned at 2,900 feet. Same company's No. 1 Broussard is bailing at 2,250 feet.

The Sun Oil Co.'s No. 8 Vade is fishing at 3,325 feet. The Gulf Production Co.'s No. 3 Smith is drilling, with a location made for No. 4. The Island Oil Co.'s No. 1 fee is drilling below 1,935 feet.

In the Spindletop Pool, the McKinney Oil Co.'s No. 2 Gladys will pump at 865 feet.

The Gulf Production Co.'s No. 214 Gladys is drilling below 820 feet. The Stella Oil Co.'s No. 7 Keith-Ward is around 1,070 feet. The Lillian Oil Co.'s No. 1 Tyrell is fishing at 710 feet.

In the Markham Pool, on the northwest side, the Barnsdall Oil Co.'s No. 1 is around 4,025 feet. The formation shows red clays. At 3,750 feet, 45-pound 8¼-inch casing was set. The Rycade Petroleum Corp.'s No. 3 Gray is drilling around 1,140 feet.

South Louisiana Pools

In the Vinton Pool, the Gulf Refining Co.'s No. 39 Star is flowing 1,200 bbls. at 3,060 feet. Same company's No. 63 G. N. G. is pumping 25 bbls. at 2,550 feet. Wilson & Broach's No. 3 Parks, a work over, is making 65 bbls. at 2,475 feet. The Vinton Petroleum Co.'s No. 4 Rescue bailed salt water at 1,740 feet.

In the Jennings Pool, The Texas Co.'s No. 19 Latrielle is a salt water well at 1,830 feet.

The Gulf Refining Co.'s No. 37 Jennings-Clement is drilling around 2,135 feet. The Port City Oil Co.'s No. 3 S. and F. is below 2,235 feet. The General Petroleum Co.'s No. 6 Fontent is drilling around 1,963 feet. The Coastal Fuel Oil Co.'s No. 90 Crowley is rigging to start drilling.

In the Lockport district, near Lake Charles, the Marland Oil Co.'s No. 1 Phoenix is drilling around 800 feet. The Vacuum-Gulf Co.'s joint No. 1-B Phoenix is drilling around 1,443 feet. No. 1-C Phoenix is at 3,508 feet. No. 2 Farquhar is around 3,210 feet. No. 3 Miller is working over at 4,080 feet. No. 4 Miller has started drilling, as has No. 3 Lock-Moore.

In Calcasieu Parish, the Rycade Petroleum Corp.'s No. 1 is at 2,545 feet. No. 1 Hooks at Lake Arthur is starting. The Pure Oil Co. is fishing below Sulphur and drilling No. 2 Sweet Lake.

In Iberia Parish, the United Oil & Gas Co.'s No. 1 Bayless & Jones is drilling around 3,140 feet in sand rock at Jefferson Island. No. 2 Fannie Loughridge is drilling around 300 feet.

In Evangeline Parish, the Ville Platte Oil Co.'s No. 1 Lowney is rigging.

In Jeff Davis Paish, the Rycade Petroleum Corp. has started No. 1 Arthur. The Yount-Lee Oil Co.'s No. 2 Welsh Land Co. is rigging.

In St. Martin Parish, the Rycade Petroleum Corp. is drilling No. 1 Hooks on the south bank of Bayou Crookchenck.

Coastal Wildcats

In Chambers County, W. C. Moore's No. 1 Blanke is around 600 feet. The Roxana Petroleum Corp. has started No. 1 Myers.

In Duval County, the Humble Oil & Refining Co. is drilling No. 1 Schallert and rigging No. 1 Woods-Welder.

In Harris County, The Texas Co.'s No. 3 Warren at Hockley Dome is around 2,765 feet and No. 4 below 1,300 feet. Wright and others' No. 1 Hunter is shut down north of Goose Creek and Baldwin and others have started No. 1 Harvey about three-quarters of a mile northwest of the Hunter. Brooks & Quinn's No. 1 Hunt is shut down at 1,300 feet. The Retrieve Oil Co.'s No. 1 Westheimer is around 2,450 feet. The Rycade Petroleum Corp.'s No. 1 Norsworthy is drilling below 2,100 feet.

In Fort Bend County, the Gulf Production Co.'s No. 4 Moore is around 2,025 feet. The Rycade Petroleum Corp.'s No. 1-B Nash is at 1,415 feet. The Marland Oil Co.'s No. 1 Moore is at 1,213 feet. The Texas Co.'s No. 1 Armstrong is around 2,500 feet.

In Wharton County, the Gulf Production Co.'s No. 3 Felder is around 4,800 feet at Boling Dome. J. F. Weed is rigging No. 1 Feltz.

In Jefferson County, the Gulf Production Co.'s No. 2 Thomas at Fannette, a formation test, is drilling around 735 feet. The Houston Oil Co.'s No. 1 Crow at Big Hill Dome is below 2,600 feet.

In Hardin County, the Texas Farms Co.'s No. 1 Hawley, near Grayburg, is around 1,915 feet. Hooks and others' No. 1 Jones, northeast of Saratoga, is at 545 feet.

In Liberty County, the Liberty Production Co.'s No. 1 Seaberg, north of Dayton, is around 765 feet. Paddock & McRear's No. 3 Invincible is rigging.

In Jackson County, the Vanderbilt Petroleum Co.'s No. 1 Seliner is drilling around 3,255 feet. The Houston Oil Co.'s No. 1 Rogers, at Horseshoe Lake, is rigging up. The Jackson County Syndicate is drilling Nos. 1 Putnam and 1 Reed, west of Edna.

In Refugio County, the Refugio Oil & Gas Co.'s No. 1 Mitchell, near the town of Refugio, is dry at 2,750 feet. No. 1 Lambert is a gas blowout. The Pratt-Hewitt Co. is drilling in No. 2 Heard as a gas well. The Houston Oil Co. is drilling No. 1 Rock around 2,200 feet. Surface casing was set at 500 feet and 6⅝-inch casing will be set around 2,350 feet.

Same company's No. 1 Woods ranch in Goliad County is drilling in tough gumbo at 2,900 feet.

Over in Live Oak County, outside of the Coastal region, the Houston Oil Co.'s No. 8 Cartwright ranch is rated as a 22,000,000-foot gas well from a new gas sand at 1,750 feet. No. 9 was abandoned as a failure. No. 10 is drilling around 1,500 feet, some 2,400 feet east from No. 3 Cartwright, a shut in gas well. No. 11 is drilling to the north on the crest of the ridge or anticlinal, 2 miles from No. 2. No. 11 is the farthest northern test. No. 12 is drilling between Nos. 3 and 7. The gas area developed on the Cartwright ranch by the Houston Oil Co. is about 2 miles from north to south and 1¾ miles from east to west.

Two deep tests are drilling in Anderson County in East Texas. The Roeser Petroleum Co.'s No. 1 Montalba is around 4,500 feet and its No. 1 Bethel is around 4,000 feet. The Elkhart Oil & Gas Co.'s No. 1, near the town of Elkhart, is around 1,500 feet.

N. LOUISIANA-ARKANSAS

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casing at 400 feet in No. 4 Umsted, Section 4-16-15; Simms Oil Co. set 10-inch casing at 512 feet in No. C-4 Berg, Section 32-15-15, and down 1,850 feet; set 6-inch casing at 2,602 feet in No. 9 Hildebrandt, Section 28-15-15; two rigs running on the Hirsch lease, Section 31-15-15; tested salt water at 2,404 feet in No. 2 E. Johnson, Section 24-15-15; drilling at 2,389 feet in No. 5 D. S. Laney, Section 31-15-15; set 10-inch casing at 525 feet in No. 9 F. A. Laney, same section, and drilling at 1,575 feet rigging up No. 5 N. B. Murphy, Section 29-15-15, and derrick up for No. 5 Reynolds, Section 32-15-15.

The Sinclair Oil & Gas Co. has two rigs running on the Berry lease, Section 33-15-15, and derricks up for Nos. 12 and 13, same lease.

Standard's Development

The Standard Oil Co. of Louisiana set 6-inch casing at 2,341 feet in No. 6 R. Bennett, Section 32-15-15, and drilling at 2,347 feet; drilling in broken lime and gumbo at 2,175 feet in No. 7 R. Bennett, Section 32-15-15; down 1,925 feet in No. 9 J. Griffin, Section 33-15-15; lubricating to kill at 2,535 feet No. 30 M. W. Hardy, Section 4-16-15; drilling gumbo at 1,775 feet in No. 5 S. L. Johnson, Section 29-15-15; set 6-inch casing at 2,587 feet in No. B-7 Murphy, Section 29-15-15; drilling at 1,930 feet in No. 6 Powell, Section 34-15-15; five rigs running on the Umsted lease, Section 32-15-15.

The Sun Oil Co. is drilling at 2,043 feet in No. 6 Johnson, Section 30-15-15; set 10-inch casing at 452 feet in No. 7 Johnson, Section 30-15-15, and down 2,002 feet; Sure Oil Corp. set 6-inch casing at 2,345 feet in No. 3 Hill, Section 5-16-15; derrick up for No. 5 Joyce, Section 34-15-15; set 6-inch casing at 2,582 feet in No. B-4 Laney, Section 31-15-15; fishing bit and collar at 2,250

feet in No. 3 Snyder, Section 34-15-15.

The Texas Pacific Coal & Oil Co. is waiting on standard rig at 2,586 feet in No. 6 Laney, Section 31-15-15; set 6-inch casing at 2,582 feet in No. 2 McCorbey, Section 32-15-15, and down 2,587 feet; The Texas Co. is coring at 2,377 feet in No. 12 Berry, Section 33 15-15; set 6-inch casing at 2,370 feet in No. 13 Berry, same section, and down 2,380 feet; made location for No. 14 Berry, and derrick up for Nos. 15 and 16 Berry, all in Section 33-15-15; No. 6 Johnson, Section 34-15-15, is blowing out salt water and gas at 2,533 feet; three other rigs running on the Johnson lease, same section; rigging up No. 2 Neely, Section 27-15-16, to deepen from 2,008 feet.

Vandiver and others have derrick up for No. 1 Yarborough, Section 22-14-17; Whittaker, O. F., is bailing to test 24 feet of sand at 2,408 feet in No. 2 Berg, Section 27-15-17; Wilroy and others set 10-inch casing at 410 feet in No. 1 Berg, Section 28-15-15, and down 760 feet; Wingfield and others waiting on standard rig at 2,380 feet in No. 2 fee, Section 5-16-16; Woodley Petroleum Co. has two rigs running on the Langley lease, Section 35-15-15.

Stephens Field

The Buffalo Oil Co. was setting 6-inch casing, 18 forbles in hole, when well blew out, blew four hours and went dead; tore part of the derrick down; now rebuilding derrick and will try to fish out casing and set at 2,121 feet in No. 2 Morgan, Section 22-15-19.

The Humble Oil & Refining Co. is rigging up No. 1 Smith, Section 7-14-19.

Bienville Parish

J. E. Smitherman set 12-inch at 310 feet and drilling at 580 feet in No. 1 Hunt Hodge Lumber Co., Section 8-15-5, 6 miles southeast of Bienville.

Bossier Parish

Kendrick and others shut down for water at 50 feet in No. 1 Webster, Section 9-18-11, 2 miles north of Haughton.

J. S. McCullough, trustee, drilling at 1,288 feet in No. 1 W. H. and C. B. Hodges, Section 25-16-12, in Elm Grove district.

Wilder & Cushman, waiting on standard rig at 1,550 feet in No. 1 Leviston, Section 13-16-12 in the north end of Elm Grove district.

Bellevue Field

G. W. Wetherbee, waiting on rotary rig at 465 feet in B. & W. Fee F-10, Section 23-19-11, tested show of oil and salt water; pulling casing to abandon at 715 feet, B. & W. Fee F-11, same section; drilling at 20 feet in No. 1 Beirly, Section 24-19-11.

Caddo Parish

In the Pine Island district, Dixie Oil Co. is arranging to set 4-inch at 3,690 feet in No. 53 Robertshaw, Section 13-21-15; Ohio Oil Co. is coring blue shale at 3,345 feet in No. 17 E. K. Smith, Section 15-21-15.

In the Hosston district, Austin Oil Co. set 10-inch at 109 feet and is down 800 feet in No. 20 Peak, Section 23-22-15; Dixie Oil Co., arranging to set 6-inch at 3,427 feet in No. 1 Jolly, Section 27-22-15; Henderson and others, drilling in rock at 1,100 feet in No. 1 Caldwell, Section 29-22-15.

In the Oil City district, Fortuna Oil Co.'s No. 15 Doan Thigpen, Section 5-20-15, blew in making 15,000,000 feet of gas and 3,000 bbls. salt water at 2,175 feet and is arranging to deepen, drilling in lime at 3,600 feet in No. 1 Mitchell, Section 17-18-16, 4 miles west of Cross Lake.

Haynes Brothers are drilling in lime at 3,180 feet in No. 1 Louisiana Live Stock, Section 8-19-16, 6 miles southwest of Mooringsport.

Shreveport Producing & Refining Co. is setting 4-inch at 2,790 feet in No. 1 Bryson, Section 17-17-16, 3 miles northwest of Greenwood.

In the old Caddo Field, the Standard Oil Co. is pumping fresh water in No. 172 Stiles, Section 27-21-16.

In the Elm Grove district, The Texas Co. is drilling in gummy shale at 2,385 feet in No. 5 Huron Land Co., Section 17-15-12.

In the Caddo Pine Island Field, The Texas Co. is changing from cable tools to rotary rig at 3,630 feet in No. 1 Federal Jeems Bayou, Section 15-20-16, and waiting on crew at 2,520 feet in No. 58 Levee Board, Section 27-21-16.

Claiborne Parish

Triangle Drilling Co. is drilling in sandy shale and lime at 2,580 feet in No. 1 Warren Brown, Section 1-19-6, 8 miles southeast of Homer, and has derrick pattern for No. 1 Keen, Section 7-19-5, about 10 miles southeast of Homer and 10 miles east of the Warren Brown well.

De Soto Parish

In the Pelican Field, L. V. Ulrey tested salt water and a show of oil at 2,835 feet in No. 1 Scott, Section 22-11-12.

LaSalle Parish

Freeman & Hawkins set 10-inch at 120 feet and down 700 feet in No. 1 Urania, Section 14-10-1e, 2 miles west of Urania.

Gould & Monroe Drilling Co. blew well two days, blew lots of salt water and little oil, and waiting orders at 1,496 feet in No. 1 Harper, Section 22-10-1e, 2 miles southwest of discovery well.

Imperial Oil & Gas Co. tested salt water at 1,440 feet and are down 1,525 feet in No. 1 Urania, Section 10-10-2e, 3 miles east of Urania.

Wright and others are drilling at 1,460 feet in No. 1 Love and others, Section 16-11-2e, 2 mile snorth of Olla.

Zeigen and others set 10-inch at 112 feet and are down 1,080 feet in No. 1 Hardtner, Section 19-10-2e, offsetting discovery well.

Lincoln Parish

Buckner and others are drilling in lime rock at 2,380 feet in No. 1 Barrett, Section 13-20-3w, 2 miles north of Dubach.

Ruston Drilling Co. is drilling in gumbo and boulders at 2,830 feet in No. 1 Richardson, Section 7-18-2w, 3 miles northeast of Ruston.

Morehouse Parish

Natural Gas Production Co. is drilling at 2,000 feet in No. 6 Tensas Delta, Section 9-21-4e, 9 miles northwest of Bastrop.

Ouachita Parish

Dickinson & Frue shut down at 2,875 feet in No. 1 Goodwin, Section 24-18-2e, 6 miles west and a little north of Monroe.

Union Gas & Power Co., rigging up to drill No. 1 Lewis, Section 15-19-5e, 10 miles northeast of Monroe.

Natural Gas Producing Co. is drilling in at 2,120 feet in No. 1 Chambers, Section 32-20-4e, 12 miles north of Monroe.

Rapides Parish

Hinsey & Mack drilled to 90 feet and waiting on new derrick in No. 1 Barrow, Section 29-5-2e.

Wheeler & Wilbanks set 12-inch at 240 feet and drilling at 970 feet in No. 1 Lanie Oil & Land Co., Section 3-4n-3e.

Union Parish

Natural Gas Producing Co. has derrick up for No. 3 Grayline, Section 32-22-4e, 9 miles northwest of Bastrop, and No. 1 Union Parish School Board, Section 16-21-4e, 8 miles west of Bastrop.

Winn Parish

Ohio Oil Co. is drilling in lime at 1,980 feet in No. 1 Rowland, Section 5-12-1w, 10 miles northeast of Winnfield.

Cotton Valley District

Alabama Petroleum Co. is setting liner in 7 feet of sand at 2,585 feet in No. 1 Robins, Section 21-21-10.

Fortuna Oil Co. is drilling at 2,485 feet in No. 1 Bible, Section 8-20-10, at 100 feet in No. 3 R. R. Cox, Section 15-21-10, and drilling in gumbo at 1,200 feet in No. 2 Maynor, Section 34-23-10.

Humble Oil & Refining Co. is drilling in shale at 1,727 feet in No. 3 Weaver Brothers, Section 25-21-10.

Ohio Oil Co. has derrick up for No. 34 Bodcau, Section 15-21-10; drilling in shale at 1,975 feet in No. 14 Gray, Section 26-21-10; set 10-inch at 450 feet in No. 15 Gray, same section, and derrick up for No. 16 Gray, same section; tested 6 feet of sand and going deeper at 2,545 feet in No. 4 Sidney heirs, Section 16-21-10; and derrick up for No. 1 Sandlin, Section 27-21-10.

Palmer Corp. is drilling in broken lime and gummy shale at 3,670 feet in No. 1 Davis, Section 23-21-10.

Standard Oil Co. set liner at 2,559 feet in No. 1 Jackson, Section 27-21-10.

Arkansas Wildcats

Bradley County

Gulf Refining Co. has derrick up for No. 1 Benson, Section 25-15-9, 16 miles south of Warren.

The Texas Co. is drilling at 2,630 feet in No. 1 Sabine Lumber Co., Section 11-16-10, 20 miles south of Warren.

Calhoun County

Genther and others set 12-inch at 60 feet, 10-inch at 450 feet, and drilling at 650 feet in No. 1 Freeman Lumber Co., Section 24-15-15, about 3 miles north of the Smackover Field.

Klotz & Thomas, coring at 2,675 feet in No. 1 Forest City Box Co., Section 14-16-14, 11 miles northeast of El Dorado and 6 miles east of Smackover.

Magnolia Petroleum Co. has derrick up for No. 1 Calion Lumber Co., Section 29-15-16, 12 miles northeast of El Dorado.

Murdock and others are reaming to bottom at 2,135 feet in No. 1 Eagle Lumber Co., Section 29-12-15, 8 miles northeast of Camden.

Clark County

Virgil Heath is rigging up to drill No. 1 Arnols, Section 12-9-20, 4 miles northeast of Gurdon.

Cleveland County

Haley and others are drilling at 1,300 feet in No. 1 Moore, Section 28-9-10, 15 miles east and a little north of Fordyce.

Columbia County

Gulf Refining Co. is drilling in gumbo at 2,580 feet in No. 1 J. D. Hines, Section 17-17-18, 15 miles east of Magnolia.

Hempstead County

Tarver and others are drilling in rock at 1,320 feet in No. 1 Swafford, Section 14-11-25, 8 miles northeast of Hope.

Lafayette County

Humble Oil & Refining Co. is setting liner at 1,216 feet in No. 1 Reed-Bodcau, Section 15-15-22, 13 miles northeast of Lewisville, drilling in gummy shale at 1,400 feet in No. 1 Shertliff, Section 3-16-23, 6 miles northeast of Lewisville; made location for No. 1 Ford, Section 28-16-24, 2 miles south of Lewisville.

Estes and others are drilling in shale and boulders at 2,255 feet in No. 1 Bodcau, Section 13-18-24, 12 miles south and a little east of Lewisville.

Miller County

Clifford Nash has shut down at 1,380 feet in No. 2 Harvey, Section 2-15-26, 15 miles east and a little north of Texarkana.

Coplen and others shut down for water at 1,320 feet in No. 1 Wiseman, Section 36-15-27, 10 miles east of Texarkana.

Davidson and others, drilling in gumbo at 1,086 feet in No. 1 Faulk, Section 20-17-27, 12 miles southeast of Texarkana.

Humble Oil & Refining Co. set 8-inch at 80 feet and down 900 feet in No. 3 Dale, Section 25-16-26, 10 miles west of Lewisville, and made location for No. 2 Fouke, Section 2-16-27, 9 miles east and a little south of Texarkana.

Nevada County

Arkansas Drilling Co., shut down curing titles at 2,249 feet in No. 1 Hamilton, Section 34-14-22, 20 miles south of Prescott and 17 miles northwest of Magnolia.

Magnolia Petroleum Co., rigging up to drill No. 1 B. F. Johnson, Section 3-15-21, 20 miles directly north of Magnolia.

OKLAHOMA

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1,500 feet of oil in the hole from sand at 2,877-2,884 feet and is drilling ahead. This is not completed.

C. G. Tibbons completed No. 1, NW cor. SW NE, Section 31-15-9, in sand at 2,307-42 feet, total depth 2,361 feet. The well was shot with 90 quarts and is good for 25 bbls. G. C. Tibbens' No. 1, NE cor. SE NE, Section 14-14-8, is also completed for 150 bbls. after a shot of 120 quarts in sand at 2,343-95 feet and his No. 7, NW cor. NE, Section 13-14-8, is making 5 bbls. after a shot of 80 quarts in sand at 2,343-85 feet, and No. 6, NW cor. SE NW, Section 13-14-8, 110 bbls. after a shot of 110 quarts in sand at 2,365-85 feet.

McClung and others' No. 1, SW cor. SE NE, Section 28-17-11, is swabbing 20 bbls. from sand at 1,255-64 feet.

J. H. Wright's No. 5, SE cor. NE SW, Section 24-17-10, shot sand at 1,808-33 feet with 100 quarts. There is 500 feet of oil standing in the hole.

Adams & Gilpin's No. 1, SW cor. NW SW, Section 20-17-10, had sand at 2,110-2,125 feet and is showing for 60 bbls. after a shot of 80 quarts. It is being cleaned out.

The Texas Co.'s No. 1, SE cor. NW, Section 25-17-9, made several small flows from the Dutcher sand at 2,847 feet. It is shut down for pipe line connections.

Wood & Farren's No. 3, NE cor. NW SE, Section 21-17-9, had sand at 2,938-45 feet and at 2,947-48 feet and made 485 bbls. the first 24 hours. It was drilled to 2,949 feet and made 502 bbls. It is not completed.

Danciger Brothers have a hole full of water at 3,205 feet in No. 1, NE cor. SW SE, Section 12-16-8. They may abandon the hole.

Jackson & Wise have completed a 2,000,000-foot gasser in No. 1-A, SE cor. NW NE, Section 3-17-11. Sand was at 1,803-07 feet and the well is shut in.

Creek County First Reports

Black Gold Producing Co.'s No. 1, SE cor. NW NE, Section 14-17-8, Creek County, is spudded. Mutual Oil Co. has spudded No. 1-A, NE cor. SE SW, Section 29-19-12. Minshall and others' No. 1, NW cor. NE SW, Section 2-18-11, is spudded and shut down for water. W. J. Cole has a rig up for No. 1, NE cor. NE, Section 5-17-11. Turner & Suppes are rigging up No. 2, SE cor. NW NW, Section 9-16-12. R. J. Allison is drilling at 350 feet in No. 1, SE cor. NE, Section 8-16-12. Lima Oil & Gas Co. is spudding No. 2, NE cor. SE NE, Section 25-15-7. Phillips Petroluem Co. is drilling at 350 feet in No. 2, NE cor. SW NE, Section 31-15-8. C. G. Tibbens has the rig up and is shoving in tools for No. 4, SE cor. NW NW, Section 13-14-8. The Texas Co. has a rig on the ground for No. 2, SW cor. SE NW, Section 13-14-8. Atlantic Oil Producing Co. has a rig on the ground for No. 1, NE cor. SE NE, Section 16-14-10. Hall & Donnelly have spudded No. 1, SW cor. Section 20-14-10. D. B. Macon's No. 1, SE cor. NW NE, Section 21-17-4, Payne County, an old well, will be drilled deeper. Old total depth was 3,004 feet. R. W. Yakish is moving in the rig and tools for No. 1, NW cor. NE NW, Section 27-17-9, Creek County. Roland Oil Co. is drilling at 400 feet in No. 1, CWL SW NW, Section 30-17-9. Holmes and others' No. 3, CSL NW NE, Section 22-19-10, is shut down at 250 feet.

Completions in Kay County

Mannahan nad others' No. 3, CWL NW SE NE,, Section 16-27-1w, Blackwell district, Kay County, is dry and abandoned at 3,523 feet. Poling & Denny's No. 2, C SE NW, Section 9-27-1w, had 9,000,000 feet of gas in sand at 830-835 feet and is drilling ahead at 840 feet. Ostot Development Co.'s No. 1, SW cor. SW, Section 8-27-1w, had sand at 3,506-15 feet, with water at 3,514 feet. It was plugged back to 3,513 feet and shot with 10 quarts. It made several small flows and is being prepared for the pump.

Soligny and others have finally completed No. 1, NE cor. SE NW, Section 31-27-2e. Sand was at 2,495-2,507 feet had the well is doing 80 bbls. on the pump.

Wire & Ketchersier have abandoned the rig for No. 1, Block 19, Lot 22, Braman Townsite. Canadian Petroluem Co. is shut down at 850 feet in No. 1, Block 12, Lot 27, Braman Townsite.

T. B. Slick has a dry hole in No. 4-E, NE cor. SE SW, Section 35-25-1w, total depth 3,895 feet.

Comar Oil Co.'s No. 20-W, CNL NW, Section 34-25-1w, is good for 1,500 bbls. from sand at 4,222-61 feet.

Amerada Petroleum Co.'s No. 40-A, NE cor. NW NE, Section 34-25-1w, is dry and abandoned at 4,720 feet.

Comar Oil Co. has a rig on the ground

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for No. 4, NE cor. SE SW, Section 5-28-1w, Braman Field, and also for No. 5, C north half SE SW, Section 5-28-1w, and for No. 1, NE cor. SW SW, Section 5-28-1w. Mealy Drilling Co. is building the rig for No. 1, NW cor. NE, Section 9-28-1w. Day Oil Co. and others are moving in the rig for No. 1, SW cor. NW, Section 3-28-1w.

Comar Oil Co.'s No. 5, NW cor. NE, Section 21-29-1w, Blackwell Field, is drilling at 470 feet. White Eagle Oil Co.'s No. 1, SE cor. SW NW, Section 32-29-1w, is spudded and shut down.

Twin State Oil Co. has a rig on the ground for No. 1, SW cor. NW, Section 14-25-2w. Comar Oil Co. is drilling at 426 feet in No. 2, SE cor. NW, Section 15-25-2w. Mid-Continent Petroluem Co. has spudded No. 1, NE cor. SW, Section 33-25-2w. Louis Friedman and others have a rig on the ground for No. 2, C8L SW SE NE, Section 28-25-1w.

Blackwell Oil & Gas Co.'s No. 4, C SW NE, Section 9-27-1w, is drilling at 350 feet.

Black Gold Oil Co. has pudded No. 1, CWL NW NW, Section 10-27-1w.

Davis Drilling Co. is drilling at 220 feet in No. 1, NE cor. NE, Section 31-28-3.

Noble County Developments

Near Perry in Noble County the Magnolia Petroleum Co. has spudded No. 1, SW cor. SE, Section 14-21-2w; Champlin Refining Co. is building the rig for No. 1, SW cor. NW, Section 26-22-2w. Mid-Continent Petroleum Co.'s No. 10-A, SE cor. NE, Section 16-23-2w, is drilling at 550 feet.

Comar Oil Co.'s No. 13-W, SW cor. NW SW, Section 2-24-1w, Tonkawa Field, is dry and abandoned at 3,150 feet. No. 2-W, SW cor. NE NW, Section 2-24-1w, swabbed 71 bbls. from sand at 4,025-63 feet, total depth 4,066 feet. It also swabbed 70 bbls. of water. No. 5-W, SE cor. NE, Section 3-24-1w, is dry and abandoned at 4,325 feet. No. 17-W, C NW NE, Section 3-24-1w, is dry nad abandoned at 4,170 feet. No. 19-W, C north half SE NE, Section 3-24-1w, is dry and abandoned at 3,446 feet and No. 3-W, NE cor. SE, Section 3-24-1w, is dry and abandoned at 4,400 feet.

In the Garber Pool

Sinclair Oil & Gas Co. is rigging up No. 9, NE cor. NW SE, Section 18-22-3w in the Garber Field in Garfield County.

Champlin Refining Co.'s No. 2-B, NW cor. SE SE, Section 16-22-3w, is drilling at 1,120 feet. Sinclair Oil & Gas Co. has a rig up for No. 5, NE cor. NW SE, Section 36-22-4w. Roxana Petroleum Corp.'s No. 2, NE cor. NW, Section 13-22-4w, is drilling at 2,358 feet. This is an old well being drilled deeper.

Marland Oil Co. is drilling at 550 feet in No. 1, NW cor. SE, Section 19-23-3w.

Sinclair Oil & Gas Co.'s No. 8, NW cor. NE NE, Section 13-22-4w, had oil at 2,345-46 feet, and is good for 8 bbls. on the pump. No. 19, NE cor. NE, Section 25-22-4w, had oil at 2,050-65 feet, total depth 2,294 feet. It is good for 10 bbls.

Roxana Petroleum Corp.'s No. 2-A, SE cor. SW SW, Section 18-22-3w, had oil at 2,303-23 feet and made 1,166 bbls. naturally. No. 1, SW cor. SW, Section 18-22-3w, had oil at 2,306-22 feet and is good for 350 bbls. naturally.

Sinclair Oil & Gas Co.'s No. 9, NE cor. SW, Section 36-22-3w, had oil at 1,212-18 feet and a 20-bbl. well.

Payne County

Skelly Oil Co. has a rig on the ground for No. 1, NE cor. SE, Section 6-17-4, Payne County. The Texas Co. has a rig up for No. 1, NW cor. NE NE, Section 17-19-5.

Magnolia Petroleum Co.'s No. 1, SE cor. NE SW, Section 8-19-5, had sand at 3,009-31 feet and is estimated at 100 bbls. It is being cleaned out and is not completed.

Mulberry Oil & Gas Co. has a dry hole in No. 1, NW cor. NE, Section 20-17-5, total depth is 4,106 feet.

Lincoln County New Work

In the Davenport Field in Lincoln County, the Magnolia Petroluem Co. has a rig on the ground for No. 1, NW cor. SW, Section 11-14-5e. No. 6, NE cor. SW NE, Section 3-15-4 is rigging up. No. 5, SE cor. NW NE, Section 3-14-5, is a rig and tools. No. 2, NE cor. NW NE, Section 3-14-5, is drilling at 500 feet. The Texas Co. has a rig on the ground for No. 5, SE cor. SW SW, Section 2-14-5, add the rig is being built for No. 4, NE cor. SW SW, Section 2-14-5. Magnolia Petroleum Co. has a rig on the ground for No. 4, SE cor. SW SE, Section 34-15-5.

Lincoln County Completions

Magnolia Petroleum Co.'s No. 2, SW cor. NW SW, Section 2-14-5, is good for 600 bbls. naturally in sand at 3,297-3,370 feet. No. 3, SE cor. NW SW, Section 2-14-5, had sand at 3,301-73 feet and is good for 505 bbls.

Day Oil Co.'s No. 1, SE cor. SE, Section 22-16-6, is dry and abandoned at 4,106 feet.

Davenport Field Completions

Magnolia Petroleum Co.'s No. 3-A, SW cor. SE SW, Section 34-15-5, had sand at 3,404-59 feet, total depth 3,461 feet. It was plugged back to 3,454 feet and made 110 bbls. nautral, which later increased to 173 bbls. nautral.

In the Weleetka Pool

Tidal-Osage Oil Co. is drilling at 1,250 feet in No. 1, SW cor. NW NW, Section 3-9-11, Weleetka district, Okfuskee County. No. 1, NE cor. NE, Section 8-9-11, is drilling at 500 feet.

Tidal-Osage Oil Co.'s No. 3, NW cor. NE NW, Section 9-9-11, had 8,000,000 feet of gas in sand at 2,655-60 feet and is drilling ahead at 2,746 feet. No. 6, SW cor. SE, Section 4-9-11, had sand at 2,990-3,025 feet and is making 6 bbls. on the pump. Mid-Kansas Oil Co.'s No. 1, SE cor. SW NE, Section 4-9-11, had sand at 2,890-2,950 feet with several breaks intervening. It is making 335 bbls. natural. Tidal-Osage Oil Co.'s No. 1, SW cor. NW, Section 3-9-11, is good for 50 bbls nautral in sand at 2,936-41 feet.

Tidal-Osage Oil Co. has abandoned the location for No. 3, NW cor. SE NE, Section 4-9-11. A rig is on the ground for No. 4, NE cor. NW NW, Section 9-9-11. Mid-Kansas Oil Co.'s No. 1, NW cor. NW, Section 10-9-11, had sand at 2,455-70 feet and is shut down with 3,000,000 feet of gas. It is not completed.

Tulsa County Operations

Short and others' No. 1, CWL NW SW, Section 24-19-12, had 1,000,000 feet of gas from 1,508-09 feet, and the 8-inch pipe collapsed. The well was plugged back to sand at 1,137-60 feet. It was shot with 100 quarts and is good for 30 bbls. on the pump.

Nowata Oil & Refining Co.'s No. 2-A, NE cor. SE, Section 30-19-12, is swabbing 60 bbls. from sand at 2,-85-94 feet. It is not completed.

Black, Sivals & Bryson's No. 12, NE cor. NW NW, Section 16-18-13, is completed. Sand was at 1,196-1,212 feet, total depth 1,225 feet. The well was shot with 40 quarts and is good for 15 bbls. on the swab. It is now pumping 15 bbls.

McMann and others' No. 1-A, SE cor. SW SE, Section 35-18-14, is dry and abandoned at 1,580 feet.

Stephens County

Cowden and others are drilling at 125 feet in No. 1, CWL SE NE, Section 2-2-5w, in eastern Stephens County. Law, Kinsey and others have a rotary rig in for No. 1, C NW NW, Section 35-1-7w, Comanche district. American Pipe Lin Co. is drilling at 300 feet in No. 3, CWL SW NW, Section 25-1-9w, Duncan district.

Winkler and others have a dry hole in No. 4, N Wcor. SE SW, Section 18–2s-7w, Comanche district, at a depth of 1,927 feet.

Mid-Kansas Oil Co. completed No. 3, NE cor. NW NW, Section 19-2s-7w. Sand was at 1,394-1,409 feet and the well is making 2,000,000 feet of gas and 50 bbls. of oil.

Magnolia Petroleum Co.'s No. 3, CWL NW NW, Section 20-12-8w, had sand at 2,167-74 feet, total depth 2,181 feet, and the well is good for 20 bbls.

C. & O. Drilling Co.'s No. 3, NW cor. SW NE, Section 22-1s-8w, is a 35-bbl. pumper from broken sands at 2,007-20 feet, total depth 2,037 feet.

Lorraine Petroleum Co.'s No. 1, SE cor. SW, Section 32-1s-8w, Duncan district, had sand at 2,229-43 feet, total depth 2,245 feet. It is swabbing 50 bbls.

Day Oil Co. has a rotary rig in for No. 1, C SW SE, Section 19-3s-7w. Commercial Petroleum Co. has a rotary rig in for No. 1, SW cor. SW, Section 12-2s-8w. Carter Oil Co. is rigging up standard tools to drill an old well deeper. No. 2, CNL NE NE NW, Section 5-2s-8w.

Pawnee County Activities

In Pawnee County the Mid-Kansas Oil Co.'s No. 1, SW cor. NW NE, Section 4-23-5, is spudded. Sun Ray Oil Co. has a rig up for No. 5, SW cor. SE SE, Section 17-20-7. J. V. Sholts and others have spudded and shut down No. 1-A, C NW NE, Section 7-20-8. McCullough, McMahon and Neely are drilling at 425 feet in No. 1, CNL SW SW, Section 24-20-8.

Magnolia Petroleum Co.'s No. 4, NW cor. NE NE, Section 5-22-3, had top of sand at 4,084 feet with first oil at 4,090 feet and a total depth of 4,102 feet. Owing to water trouble it was plugged back to 4,095 feet and shot with 20 quarts. It is good for 194 bbls.

C. L. McMahon's No. 4, NE cor. NW SW, Section 24-20-8, had sand at 3,762-68 feet and was shot with 10 and with 20 quarts. It is estimated at 150 bbls., and will be shot again.

Tidal Oil Co.'s No. 7, NW cor. NW, Section 21-20-7, had sand at 2,625-45 feet, total depth 2,649 feet. It was shot with 30 quarts and is good for 50 bbls. It is not completed.

Mid-Continent Petroleum Co.'s No. 12, NW cor. SW SW, Section 16-20-7, had sand at 2,609-63 feet and is estimated at 40 bbls. after a shot of 5 quarts. It is not completed.

Prairie Oil & Gas Co.'s No. 1-A, NW cor. NW, Section 15-20-7, had sand at 2,869-85 feet, nad is good for 20 bbls.

Magnolia Petroluem Co.'s No. 5, SE cor. SW SE, Section 16-20-6, had sand at 2,996-3,061 feet and is good for 25 bbls. natural.

Quiet in Cromwell

Tidal Oil Co. & Carter Oil Co.'s No. 3, SE cor. SW NW, Section 14-10-8, Cromwell Field, Seminole County, is estimated at 100 bbls. from sand at 3,320-33 feet.

Sinclair Oil & Gas Co.'s No. 4, NW cor. NE SE, Section 5-10-8, is good for 220 bbls. from sand at 3,419-52 feet. It was shot with 10 quarts and showed a small increase.

Nowata Oil & Refining Co. has a rig on the ground for No. 3, SE cor. NW NE, Section 3-10-8, and Schermerhorn and others are building the rig for No. 3-A, SE cor. NE NE, Section 15-10-8.

Papoose Developments

North of the Papoose Pool Burke-Greis Oil Co. No. 1, SE cor. SE, Section 16-10-9, Okfuskee County, is dry and abandoned at 2,910 feet. No. 2, NW cor. SE SE, Section 16-10-9, had sand at 3,251-91 feet and is a 60,000,000-foot gas well.

Olean Petroleum Co.'s No. 2, NW cor. SW SE, Section 36-11-9, had 15,000,000 feet of gas nad a spray of oil in sand at 3,602-08 feet. It has a fishing job.

Burke-Greis Oil Co. has spudded No. 1 SE cor. SE, Section 27-11-10.

The Carter Oil Co. completed a 260-bbl. well in No. 9, NE cor SW SE, Section 33-10-9, in sand at 3,320-54 feet.

Amerada Petroleum Co. and Gilcrease Oil Co.'s No. 4, SW cor. SE SW, Section 36-10-9, had sand at 3,325-95 feet, and is completed, an 18,000,000-foot gas well.

Independent Oil & Gas Co.'s No. 1, NW cor. SW SW, Section 1-9-9, was a failure. It had top of lime at 3,374 feet, shale at 3,394-3,405 feet, sandy lime to a totol depth of 3,414 feet, at which depth it was dry and abandoned.

Phillips Petroleum Co.'s No. 4, NW cor. SE SE, Section 3-9-9, is a 1,000-bbl. well in sand at 3,275-98 feet. It was shot with 5 quarts.

Transcontinental Oil Co.'s No. 10, NW cor. SE NE, Section 4-9-9, is dry and abandoned at 3,366 feet.

Indian Territory Illuminating Co.'s No. 2, SW cor. NW SW, Section 1-9-9, had sand at 3,383-3,403 feet and was shot with 1 quart and is being cleaned out. It is estimated at 25 bbls. No. 5, NW cor. NE SW, Section 1-9-9, made 590 bbls. naturally from sand at 3,379-94 feet. It is being cleaned out. No. 8, NE cor. SW, Section 1-9-9, had sand at

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3,380-3,409 feet and has a show for 400 bbls. after a shot of 2½ quarts. It is being claned out.

T. B. Slick completed No. 4-A, NE cor. SW, Section 3-9-9, in sand at 3,297-3,309 feet. The well is making 25 bbls. naturally.

T. B. Slick has a dry hole in No. 8, SE cor. NE SW, Section 3-9-9, total depth 2,925 feet.

In the Yeager Field

The Independent Oil & Gas Co.s No. 1, CSL SW SW, Section 18-8-10 is good for 50 bbls. It found sand at 3,335-42 feet and went back into sand again at 3,356 feet.

Prairie Oil & Gas Co.'s No. 2, NW cor. NW, Section 20-8-10 had sand at 3,367-3,735 feet and is drilling at 3,775 feet. It has 20,000,000 feet of gas and no oil. It is not completed.

Central National Oil Co. finished a dry hole, No. 1, NE cor. SW NE, Section 14-11-7, total depth 3,750 feet.

Miscellaneous Operations

Ponca Oil & Gas Co.'s No. 1, NE cor. NE, Section 34-13-9w, Canadian County, is underreaming the 5-inch casing at 3,183 feet.

W. R. Duke is drilling at 125 feet in No. 1, NW cor. SW, Section 30-8-21w, Beekham County. Kauri and others' No. 1, N Wcor. NW, Section 31-8-21w, is dry and abandoned at 1,103 feet. Magnolia Petroleum Co.'s No. 1 NE cor. SE NE Section 4-8-21w, is drilling at 200 feet.

Magnolia Petroleum Co.'s No. 2, CSL NW SW, Section 11-4-8w, Grady County, is rigging up a rotary. Magnolia Petroleum Co.'s No. 1, C NE NW, Section 11-4-8w, is a 21,000,000-foot gasser from sand at 1,369-80 feet. Stogner and others' No. 1, C SE SW, Section 36-5-8w, had broken sand at 2,153-76 feet. It had 25,000,000 feet of gas when the water broke in behind the pipe.

Becker & Reid's No. 1, C SE SW, Section 3-3-10w, Comanche County, is spudded and shut down. Couch & Cherry's No. 1-A, NE cor. SW SW, Section 24-2-10w, is a rotary being rigged up. Bylega and others have a machine in for No. 1, CNL NW SE SW, Section 16-2-15w.

C. A. Hogan and others are drilling at 700 feet in No. 1, NW cor. SW SW, Section 1-55-15w, Tillman County. Penn Western Oil Co. and the Waite Phillips Co. are drilling at 1,200 feet in No. 1, N Wcor. SE, Section 16-3s-18w.

W. E. Norton and others have a dry hole in No. 1, SE cor. SE, Section 7-5s-9w, at a total depth of 2,325 feet.

New Osage County Operations

Atlantic Oil Producing Co. spudded No. 1, C south half SW SE, Section 12-24-8, Osage County. Marland Oil Co. has a machine in for No. 20, SE cor. NW, Section 26-24-9. Meridian Petroleum Co. has a rig up for No. 6, C north half NW NW, Setion 18-22-9. Devonian Oil Co. and Marland Oil Co. have a rig up for No. 1, SE cor. NE, Section 10-21-10 Tidal Osage Oil Co. is rigging up No. 1, NW cor. SW, Section 11-21-10. Winona Oil Co. has a machine in for No. 8, CSL SW SW, Section 27-29-11. Wiser Oil Co. has spudded No. 12, CNL NE NW, Section 27-29-11. Simmons and others are drilling at 390 feet in No. 4, CEL NE NE, Section 36-29-11. Lambert & Alcorn's No. 1, CWL SE, Section 36-29-11, is drilling at 450 feet. The Texas Co. has the rig and tools in for No. 1-A, CNL NE SE, Section 21-25-8 Owen-Osage Co. has spudded No. 33-C, CSL SE SW SW, Section 8-27-11. Kansoma Oil Co. has spudded No. 7, CSL SW SE, Section 33-27-11. Barnsdall Oil Co. is drilling at 225 feet in No. 5, C SW SW, Section 2-24-11. Seamens and others' No. 1, NE cor. SW, Section 17-26-6, is spudded. Carter Oil Co. is drilling at 470 feet in No. 7, SE cor. NE, Section 20-26-6, and No. 8, CSL SW SE NE, Section 20-26-6, is spudded. The Texas Co.'s No. 1-A, CNL NW NE SE Section 21-26-6, is spudded Lewis Oil Co. is rigging up No. 5, C SE NW, Section 29-25-8. Barnsdall Oil Co. has a machine in for No. 9, CSL NW, Section 11-24-10. Owen-Osage Co.'s No. 337, CWL NW SE, Section 7-23-11, is rigging up. Roxana Petroleum Corp. is rigging up No. 1, SE cor. NE NE, Section 33-21-10. Elliott & Smith are rigging up No. 19, C NW NW, Section 30-21-12. Barnsdall Oil Co. has the rig up for No. 27, CSL SE NE NE, Section 31-21-12.

KANSAS

(Continued from Page 36)

It was given a shot of 240 quarts and and made 75 bbls. the first 2 hours after the shot.

Nye and others' No. 1, NW cor. SW NW Section 5-22-11, is dry and abandoned at 2,102 feet.

Titus and others' No. 1, NE cor. NW NE Section 30-22-10, had sand at 2,420-62 feet and is making 200 bbls. after a shot of 140 quarts.

Sinclair Oil & Gas Co. finished several good wells in the Browning Pool. No. 24, SE cor. SW SW Section 20-22-11, had sand at 2,297-2,368 feet and made 420 bbls. the first 9 hours after a shot of 120 quarts. No. 23, CSL SE SW NW Section 20-22-10, started at 300 bbls. after shots of 10 and 20 quarts in sand at 2,276-2,347 feet. No. 21, NW cor. SE SE Section 19-22-10, had sand at 2,315-87 feet, and was a 200-bbl. initial producer after a shot of 10 quarts.

White Eagle Oil Co.'s No. 3 SW cor. NW NE Section 13-22-0, had sand at 2,119-2,152 feet and is good for 70 bbls. naturally.

Skelly Oil Co. and others' No. 2, SW cor. NE NW Section 13-22-10, was shot with 50 quarts in sand at 2,157-75 feet, and is good for 10 bbls.

Davis, Hazlett and others' No. 5, SE cor. NE SE Section 12-22-10, had sand at 2,060-2,122 feet, total depth 2,133 feet. It was shot with 240 quarts which produced 800 bbls. the first 24 hours.

Helmbrecht and others have a rig up for No. CEL SE NE Section 8-27-10, Greenwood County. Phillips Petroleum Co. is building the rig for No. 4, NW cor. SE SW Section 12-22-10. White Eagle Oil Co. is drilling at 625 feet in No. 4, NE cor. SE SW, Section 13-22-10. Sinclair Oil & Gas Co. has spudded No. 22, NE cor. SW SE Section 19-22-10. Titus and others have spudded No. 7 C south half NE NE Section 30-22-10. Empire Gas & Fuel Co. is drilling at 500 feet in No. 5, SE cor. NE SE, Section 11-22-11. White Eagle Oil Co.'s No. 7, C north half NW NE Section 12-22-11, is spudded. Empire Gas & Fuel Co. has spudded No. 1 NW cor. SE Section 14-22-11.

Results in Cowley County

Briggs and others No. 1, SW cor. NW Section 7-33-7, Cowley County, was abandoned at 100 feet.

Southwestern Petroleum Co.'s No. 1, SE cor. NE Section 18-32-6, is dry and abandoned at 2,275 feet.

Phillips Petroleum Co.'s No. 26, C north half SE SE Section 17-35-7, had sand at 2,028-63 feet, was shot with 150 quarts and is good for 75 bbls.

Terrian & Ballierre's No. 1, SW cor. SE SW Section 29-31-6, is dry and abandoned at 2,985 feet.

Trees Oil Co. completed No. 3, NW cor. SE NE Section 10-31-3. Sand was 2,989-3,009 feet, total depth 3,010 feet. The well is good for 45 bbls. naturally. No. 4, SE cor. SW NE Section 10-31-3, was also completed for 40 bbls. in sand at 3,028138 feet. No. 2, NW cor. NE SE Section 10-31-3, is not completed, but has 1,000 feet of oil in the hole from sand at 3,017-37 feet.

C. M. Roth and others have a dry hole in No. 1 NW cor. SE NNW Section 30-31-5. Total depth is 3,429 feet.

Marland Oil Co.'s No. 1, SW cor. SE SE Section 3-33-3, is dry at 3,718 feet.

Marland Oil Co.'s No. 7, SE cor. NW Section 10-33-3, had sand at 2,544-60 feet, first oil at 2,552 feet, and is good for 100 bbls. No. 1, SE cor. NW NE Section 10-33-3, is abandoned and the rig moved away.

Marland Oil Co.'s No. 7, SE cor. NW Section 10-33-3, had sand at 2,544-60 feet, first oil at 2,552 feet, and is good for 100 bbls. No. 1, SE cor. NW NE Section 10-33-3, is abandoned and the rig moved away.

Roxana Petroleum Co. completed No. 1-A, NW cor. SW, Section 10-33-3. Sand was 2,560-85 feet. The well swabbed 71 bbls. of oil and 35 bbls. of water.

Waite Phillips Co.-Marland Oil Co.-Independent Oil & Gas Co.'s No. 3, SE cor. SW SW Section 17-33-3, got sand at 3,246-65 feet, total depth 3,266 feet. It made 265 bbls. the first day. No. 4, SW cor. SW Section 7-33-3, had sand at 3,238-58 feet, total depth 3,259 feet, and made 121 bbls the first day. No. 5, SE cor. NE SE Section 20-33-3, started at 350 bbls. from sand at 3,195-3,229 feet, total depth 3,230 feet.

The Carter Oil Co. completed No. 5, NW cor. NE SE Section 19-32-3, in sand at 2,595-2,609 feet, and the well made 220 bbls.

New Work in Cowley County

Connelly & Nye have spudded and shut down No. 1, SE cor. SW SW, Section 2-30-5, Cowley County.

Marland Oil Co. is drilling at 960 feet in No. 3-A, SE cor. NE, Section 9-33-3. In Rainbow Bend, Waite Phillips, Independent Oil & Gas Co.-Marland Oil Co. have spudded No. 2, SE cor. SW NE, Section 17-33-3; and No. 8, SE, cor. NE NE, Section 20-33-3, is also spudded and the 20-inch pipe run at 42 feet. No. 3, SE cor. SW, Section 21-33-3, is spudded, and No. 1, CSL SW NW NE, Section 28-33-3, is drilling at 330 feet.

T. B. Slick and others have a rig up for No. 4, SE cor. NE, Section 19-32-3, and a rig for No. 5, NW cor. SW, Section 20-32-3.

Phillips Petroleum Co. is shut down at 870 feet in No. 57, SW cor. SE SE, Section 8-35-7.

Cowley County First Reports

In Rainbow Bend, the Waite Phillips Co.-Independent Oil & Gas Co.-Marland Oil Co.'s No. 2, CWL NW SW NE, Section 28-33-3, is spudded, and No. 8, NE cor. NW, Section 28-33-3, is also spudded; No. 10, SE cor. NW, Section 28-33-3, is spudded.

Roxana Petroleum Corp. is building the rig for No. 1, NE cor. SW NW, Section 22-34-3.

White Eagle Oil Co.'s No. 2, SE cor. NW SW, Section 30-30-6, is drilling at 900 feet.

Cowley County Completions

Lewis Oil Co.'s No. 5, SE cor. NW SW, Section 31-30-6, had sand at 2,840-95 feet, and is making 312 bbls. naturally. It is not completed. No. 6, CSL SE NW, Section 31-30-6, is spudded.

Butler County

Sparta Drilling Co.'s No. 1, NW cor. SE, Section 32-26-6, Butler County, is drililng at 1,185 feet. It is an old well drilled deeper.

Boyle and others are drilling at 230 feet in No. 1, NE, cor. SW SE, Section 22-27-7.

National Refining Co. has spudded No. 2, C south half NE, Section 17-21-4, Marion County.

Hartman & Skear are rigging up No. 1, NW cor. SW, Section 17-29-1, Sedgwick County. Curtis and others are shut down for 12-inch casing at a depth of 1,080 feet in No. 1, CSL NW NW, Section 19-29-1w.

In Elk County, the Roth-Bert Oil Co.'s No. 10, CWL, East half SW, Section 12-29-8, had sand at 2,011-40 feet, was shot with 140 quarts and is making 100 bbls.

The Elk Petroleum Co.'s No. 2, SW cor. NW SE, Section 3-30-9, had sand at 1,037-50 feet, and is good for 150 bbls. on the pump.

Pure Oil Co.'s No. 3, NW cor. SE, Section 14-31-10, is estimated at 100 bbls. from sand at 1,337-58 feet. It is not completed. No. 4, NE, cor. SE, Section 14-31-10, had sand at 1,335-56 feet, total depth 1,466 feet. It is estimated at 80 bbls.

In Sumner County, Shawver and others have a dry hole in No. 1, SW cor. SE, Section 34-34-1w, total depth is 2,850 feet.

NEW MEXICO FIELDS

(Continued from Page 40)

1, cleaning out after shot; Daugherty's No. 1 Ohio Oil Co., shut down at 600 feet; Dancigar Oil & Refining Co.'s No. 2, Section 17, drilling at 1,000 feet, No. 3, same section, drilling at 500 feet, No. 2, in Section 18, drilling at 400 feet; Flynn, Welch & Yates' No. 15, drilling below 1,600 feet, No. 16 drilling below 700 feet, No. 20 on production, No. 21 drilling at 1,000 feet, No. 22 drilling at 450 feet; Fletcher & Agnew, Section 5, rigging up; Hugh Burch, drilling at 450 feet; Monita Oil Co., gas at 1,840 feet; Marland-Hogan Johnson's No. 1, drilling below 1,800 feet; Maloney & Chambers drilling at 2,200 feet; Maljamar Oil & Gas Co.'s No. 7, drilling at 1,200 feet, No. 8 drilling at 1,000 feet; Mesa Oil Co.'s No. 1, drilling at 250 feet; Ohio Oil Co.'s No. 1 Tracy, drilling below 4,000 feet, No. 1 McCullough, drilling at 1,590 feet; Toomie & Allen's No. 2, drilling at 1,100 feet; No. 3 drilling at 600 feet; Ohio Oil Co. & Gilliland Oil Co.'s No. 2, drilling at 600 feet; Pioneer Oil & Gas Co.'s No. 1, resumed drilling after straightening crooked hole: Ramage's No. 1, 1950 feet; Snowden & McSweeney's No. 1, on McNutt permit, drilling at 1,740 feet; Snowden & McSweeney and McNutt's Nos. 2 and 3, on Snowden-McSweeney's No. 2 Section 33, drilling 1,700 feet; Sandburg & Fisher, drilling 1,970 feet; Texas Co.'s No. 2, drilling 900 feet; V. K. F. Oil Co.'s No. 2, drilling 1,780 feet; No. 3, drilling 1,500 feet; Williams Petroleum Co.'s No. 2, rigging up.

Lea County

Holmes' No. 1, drilling below 800 feet; Croft's No. 1, drilling 780 feet; Ward's No. 1, drilling; Fenton's No. 1, drilling; New Mexico Producers' No. 1, drilling at 650 feet; J. C. Covert made a location for No. 1, in NW NW Section 15-21-30.

Chaves County

Arkansas Fuel Co.'s No. 1 Manning Dome, Chaves County, drilling at 900 feet; Hogan-Dunken Dome No. 1, spudded in; Lewis and others No. 1, shut down down at 2,880 feet; California Oil Co.'s No. 1 Hagerman, drilling at 2,900 feet; Buffalo-Roswell No. 1, drilling below 3,200 feet Campbell's No. 1, drilling below 2,500 feet.

San Juan County

Burkburnett-McClure No. 1, on production; West Coast No. 1, rigging up; Patterson & Stuppi No. 1, moving in tools; Coal Creek No. 3, drilling; Rainbow No. 1 Ute lease, drilling below 1,580 feet;. Continental No. 1, spudded in; Huntington Park No. 1, drilling; Bruce Beagle No. 1, fishing jib.

McKinley County

Pierce No. 1, drilling 300 feet; Melsted No. 1 Seven Lakes, drilling 340 feet; Union United, drilling below 460 feet.

SOUTHWEST TEXAS FIELDS

(Continued from Page 42)

to the Jim Hogg County Pool, failed to make a well though it stood 900 feet in oil. The 5 3-16 inch casing and the 6⅝- inch casing are both being pulled, and the 5 3-16 will be set in cement in an attempt to shut off the water. A light rig will be used to drill it in and the rig now on the test will be moved 300 feet away and another test drilled, contract for the second test having been let to Bob Newton. Operators are confident they have found another pool to the Mirando Field, and believe the second test, which will be drilled carefully and will case off the water before drilling in, will prove a success. Test is on Survey 291.

Magnolia Petroleum Co. is spudding in No. 1 Bank, a test on Survey 415, immediately south of Pippin-O'Byrne, and Conway & Bailey have spudded in a test on Survey 267 immediately to the northwest of the Pippin-O'Byrne well. These tests are being made in the belief that the Pippin-O'Byrne test will be a successful well and open a field.

Grayburg Oil Co., still a little farther to the northwest beyond the Conway & Bailey test, is shut down on the No. 1 Weil on Survey 85, at 1,500 feet for lack of water.

North of the Jim Hogg Pool, Weber Oil Co. has abandoned at 3,745 feet the No. 4 Holbien. Alexander and others' No. 1 Vela is setting up.

In and near the proven field, Killam's No. 7 Martinez is fishing at 2,076 feet; No. 11 Martinez has a derrick up and No. 12 is rigging up. Killam-Lang's No. 2 Vela is drilling at 1,800 feet in lime

and shale; Kitselman & St. Albans, at 2,085 feet is swabbing 300 bbls. of oil daily. Rydal-Texas Co.'s No. 1 Vela, at 2,089 feet, swabbed 250 bbls.

C. A. Beauchamp's No. 1 Given, a little east of the Jim Hogg Pool extension is drilling below 750 feet.

DeWitt County

Yoro Development Co.'s No. 1 Tom Burns, near Edgar, is drilling below 1,500 feet. Cuero Oil & Gas Co.'s No. 1 William Holzappel is in blue gumbo at 1,500 feet.

Frio County

Lefevre & Storey's No. 1 Blackaller has completed taking a core at 2,930 feet. Core has not been identified.

Gonzales County

F. L. Dismukes, who several years ago drilled six wells in northern Gonzales County to a depth of 130 feet, which made around a half-barrel each daily, has spudded in No. 1 Bouldin-Lum, 2½ miles southwest of Harwood, and will attempt to pick up a sand at about 560 which it is believed may make a shallow field. The locality is about 15 miles east of the Luling oil field.

R. M. Bleakie has nearly completed rigging up on the No. 1 J. S. Moore at Dewville and 6 miles north of Nixon, and expected to spud in last Saturday with a big rig, 112-foot derrick, and expecting to make a deep test.

Gonzales Gas & Oil Co. has set casing at 397 feet in the No. 1 William Voight, 7 miles southwest of Gonzales, and will drill in expecting to develop enough shallow gas to supply Gonzales.

Guadalupe County

Scrivner and others, at 1,740 feet, were in the Buda lime, and with a slight saturation of oil which encouraged the operators to believe there was hope of production when the Edwards is reached. Allen Burman's No. 1 Bailey at Kingsbury and J. M. Davis' No. Hoese in western Guadalupe are each shut down on account of titles, the first at 1,900 feet and the second at 1,629 feet. McClanahan is drilling at close to 2,000 feet in No. 1 Lenz in western Guadalupe. York Creek Oil Co. has finished rigging up in No. 1 Fulshear, which has been standing at 2,060 feet, and will carry it down to the Edwards lime. Southwestern Extension Syndicate (Howell Brothers) cored at 1,560 feet in No. 1 Willman, north of Kingsbury. Formation is Taylor marl and drilling resumed.

Karnes County

Earl B. Reynolds' No. 1 Butler well in Karnes County, which for a time looked like a possible producer at 2,652 feet, was drilled in and bailed but failed to make a well. The formation contained some oil but not enough. It may be drilled deeper.

Live Oak County

W. J. Walton's No. 1 Odem, 1 mile west of Three Rivers, where attempts have been made to bring in both gas and oil, may prove to be a small gasser at 850 feet after casing is set and the hole tested. The well made gas through the drill stem with considerable force when a sand was topped at 850 feet last week. Casing was set at 660 feet on a rock, and when drilled through went into salt water. Casing will now be set below the salt water and a test of the gas sand made. The well is 1,500 feet south of the No. 1 C. R. Tips lost by Glassco & Fallin at 660 feet, after making gas for a month. Glassco & Fallin's No. 1 Harris, 1,500 feet north of the C. R. Tips No. 1, is a 2,000,000-foot gasser at 660 feet. Henderson Coquat's No. 1 C. R. Tips, in the western edge of Three Rivers, has spudded in and Homer Powell's No. 1 C. E. Tips, a half mile north has spudded in.

Plateau Oil Co. and Texas Coal & Oil Co. are deepening their No. 1 D. B. Miller, in southern Live Oak County and are drilling at about 2,700 feet with the intention to go at least to 3,000 feet.

Maverick County

Rycade Oil Corp. is understood to have taken a lease on 5,000 acres in Maverick County from J. K. Burr, in addition to the Cox ranch and the big Chittim ranch of 173,000 acres on which has just started one test.

Medina County

Ina Oil Co. has casing on the ground for No. 1 Blackburn in Medina County, in which it was reported last week in the Edwards at 1,872 feet and with a slight showing of oil. It will be tested soon. Easthan & Tarver are drilling at 400 feet in No. 1 Violet Smith. Arnett Oil Co. has set casing in No. 2 Nixon, and will soon drill in; Commodore Oil Co. is getting ready to test at 965; California-Medina Oil Co.'s No. 1 Rothe, in Western Medina County, is preparing to resume operations this week at 2,170 feet, where it is said to be in the Pennsylvania, but with a strong flow of water. The water will be cased off and a test made. The well for several hundred feet has been in black and brown lime and shale. A. G. Keifer Drilling Co. is casing off salt water at 1,100 feet and will drill deeper in the No. 1 Adams.

D. C. & M. C. Syndicate believes it has a commercial well in the No. 7 Lowe at 410 feet on the Lowe ranch in McMullen County 10 miles south of Tilden. It is starting No. 8 Lowe. No. 4 Lowe is still fishing at 2,390 feet. The shallow sand around Nos. 6 and 7 Lowe at 410 feet is to be developed by the company.

Grubstake Investment Association's No. 1 Fisher, at Calliham is to be deepened from 800 to 1,054 feet where the company believes it can bring in another oil sand. No. 4 Brown is drilling; No. 1 Aycock is waiting for casing and No. 3 Jacobs is shut down.

PIPE LINE CONTRACT

The Moody Gulf Gas Co. has closed the contract with the Hope Engineering & Supply Co. for the construction of a 165-mile 14-inch and 16-inch high pressure line from Refugio to Houston, Tex., with a booster station in the vicinity of Edna.

REPORTS GAS IN NEW ZEALAND

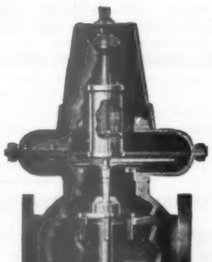
The Moturoa test well of Taranaki Oil Fields Ltd., at New Plymouth, New Zealand, which was located by F. G. Clapp of New York in December, 1924, is reported by Mr. Clapp to have struck gas in a shallow sand. This is the first well of the company. The volume is said to gauge 5,000,000 feet per day and the closed-in rock pressure 625 pounds per square inch. The depth of the sand is 1,555 feet. Mr. Clapp hays the gas will be saved and the well drilled deeper to test for oil. The Tarata test of the same company is drilling above 1,800 feet in soft clay with a smell of gas. This information is of date July 1, 1925.

SEEK ORE IN WELL

DEFIANCE, Ohio., Aug. 3.—Drillers are reopening an abandoned oil well on the Mathias Wannemacher farm, in Highland Township, Defiance County, Ohio, in hope of striking a lode of minerals said to have been discovered 30 years ago at a depth of 1,600 feet. W. A. Linard of Putnam County, who put down the first well which proved to be a duster as far as oil was concerned, has the new lease. A soft white metal was said to have been brought to the surface when the well was abandoned and it is after this that the work will be done.

MORE BUSES IN DETROIT

Detroit Motor Bus Co. has added 60 new six wheel buses of the one and two-deck classes, many scheduled for new routes established between Detroit and Wayne, Bloomfield Hills, Wyandotte and other suburbs. An order for approximately 150 more buses has been sent to manufacturers for 1926 delivery, which will give the company a total of 560 passenger carrying buses by end of 1926.



The Davis Supersensitive Relief Valve was designed to serve as a relief on light gauge separating tanks erected in the field. Also adaptable to closed storage tanks to prevent accumulation of pressure. May be set to relieve at atmospheric pressure or slightly more. Operation controlled by inlet pressure. Port area equal to that of pipe. Internal dashpot steadies action. Readjustment easily made through compression spring. All working parts covered by cast hood. Sizes 2 to 14 inches, with screwed or standard flanged ends.

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The Davis Casing Head Gas Regulator is an automatic valve designed to control the vacuum on oil and gas wells, receivers and tanks in the manufacture of gasoline. The counterweight holds it open—the vacuum closes it. A balanced bevel-seated disc with graduated port openings, securely coupled to a flexible diaphragm is its only moveable part. Reversing the position of the lever so the counterweight holds the valve closed converts the regulator into a low pressure, back pressure or relief valve suitable for not more than 10 pounds. Sizes 2 to 14 inches, with screwed or standard flanged ends.

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Is provided with forged steel Herringbone gear and pinion, heat treated for toughness. The gear is furnished with extra heavy rim and the pinion and pinion shaft are made integral from one forging.

Send for complete data and prices

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S E R V I C E

Consistent Demand

Consistent demand has made it necessary to appoint a direct Spengler representative for the Mid-Continent fields. Mr. J. O. Carter, an experienced oil man, has been selected to serve in this capacity. For the present, his headquarters will be the Rice Hotel, Houston, Texas. First hand information on the services of this company will be obtainable through Mr. Carter.

SPENGLER
CORE DRILLING COMPANY

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TAFT, CALIFORNIA, PHONE 81

R E S U L T S

CANADIAN FIELDS

(Continued from Page 44)

occasioned by the recent report of an oil showing encountered in Canadian Western Natural Gas Co. No. 5. Extensive filings have been made in townships 6-11w4 and 5-11w4. No. 5 gasser, where the oil showing was encountered, was located on the southeast quarter of Section 14-6-11w4. It is understood that oil showing was encountered last June at 2,002 feet in an 8-foot "sand" of interstratified sand and shale at the base of the Colorado shales. It is claimed the horizon is some 800 feet higher than the Ellis sand in the Montana fields. The oil was apparently a heavy oil of about 25 gravity, somewhat similar to the heavy oils of the Irma-Wainwright Field. According to the company, the shale merely showed traces of this heavy oil, and after it had been examined it was decided not worth exploitation, so was based off and the test carried deeper for gas, a gas production of 10,000,000 feet a day being encountered at about 2,050 feet. The showing is the first indication of oil encountered in the southern Alberta dry gas fields, though a similar small show of heavy oil was met some years ago in a well in the Viking Field. No. 6 well, on the same structure, is reported drilling below 1,500 feet with a rotary outfit, and should reach the oil horizon in another week's drilling. The Canadian Western Natural Gas Co. has about 4,500 acres under lease to protect its field; while some additional territory has been leased by Foremost and Lethbridge men.

Largest Gasser in Viking

In the Viking Field, east of Edmonton, the Northwestern Utilities, Ltd. gasser recently completed is reported good for close to 10,000,000 feet a day, being the largest well yet drilled in the Viking Field.

Imperial Oil, Ltd. is reported to have contracted with the Ohio, Continental, International and several other companies for practically all the storage oil in the Kevin-Sunburst Field of Montana. Illinois Pipe Line Co. is delivering about 10,000 bbls. a day across the boundary, shipments being made from the receiving station in tank cars to the Calgary and Regina refineries.

Arro Oil & Refining Co. of Lewiston, Mont., is reported commencing construction of its new refining plant at Coutts, Alberta, and has taken over the properties of the Pure Oil Co. in Montana.

In the Ontario fields, the Colchester Oil & Gas Co., a new organization, is reported to have taken over the wells and leases in Zone and Camden townships, Kent County, formerly owned by the Vacuum Gas & Oil Co. of Toronto. The properties include a number of shallow wells drilled some time ago; several of these have been cleaned out and are reported producing 20 bbls. a day. Plans are being made for the completion of the unifinished E. P. Rowe deep test north of Thamesville, which has been shut down at 2,210 feet. This test is to be carried to the Trenton limestone, which has never been tested in the Thamesville area.

Canadian Oil Companies, Ltd. distributing plant at Regina, Sask., was partially destroyed by fire recently, the loss to the building being $75,000 and to stock and equipment about $175,000. The plant was the head office and main distributing station for Saskatchewan.

TEXANS LONG ON MILEAGE

AUSTIN, Tex., Aug. 3.—There was half a billion miles of automobile travel in Texas during June. This was revealed by the sales tax on gasoline, which showed over 40,000,000 gallons of gasoline retailed during the month. The sales tax exceeded $400,000, of which five large companies paid $292,367, a gain of $1,225 over their May payments.

The Gulf, Texas and Magnolia companies showed increases, the Pierce and Humble companies slight decreases for the month. June tax, at 1 cent per gallon, by these companies was: Gulf Refining Co., $101,407; Texas Co., $65,190; Magnolia Petroleum Co., $73,996; Pierce, $30,106; Humble, $21,665.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended July 25, totaled 551,000 bbls., a daily average of 78,714 bbls., against 718,000 bbls., a daily average of 102,571 bbls. for the week ended July 18, and a daily average of 56,429 bbls. for the four weeks ended July 25.

At Atlantic Coast Ports—	
Baltimore	95,000
Boston	65,000
New York	255,000
Philadelphia	146,000
Total	551,000
Daily average	78,714
At Gulf Coast Ports—None.	
Total Atlantic and Gulf Coast ports	551,000
Daily average	778,714
Daily average four weeks ended	56,429

According to figures collected by the American Petroleum Institute, imports of petroleum (crude and refined oils) at the principal ports for the week ended July 25 totaled 1,033,000 bbls., a daily average of 147,571 bbls., as compared with 1,929,000 bbls., a daily average of 275,572 bbls. for the week ended July 18, and a daily average of 124,857 bbls. for the four weeks ended July 25.

At Atlantic Coast Ports—	
Boston	53,000
New York	324,000
Others	184,000
Total	561,000
Daily average	80,143
At Gulf Coast Ports—	
Galveston district	161,000
New Orleans and Baton Rouge	311,000
Total	472,000
Daily average	67,428
At All United States Ports—	
Total	1,033,000
Daily average	147,571
Daily average four weeks ended	124,857

IMPERIAL COMPLETES STOCK SUBSCRIPTION

The Imperial Oil Co., Ltd., the first of the Standard Oil units to complete a five year term of employe subscription to stock, announces it has distributed certificates for 347,000 shares to 3,219 employes. The stock thus sold has a market value of approximately $11,000,000, or two and a half times the $4,434,212 paid by employes.

Stock now owned by employes represents about 5½ per cent of the 6,491,852 shares issued. Under the plan employes subscribed up to 20 per cent of their annual salaries, with the company adding 50 cents for each dollar so subscribed and buying stock with the proceeds. Accruals and dividends brought the total to an amount permitting the acquisition of 347,000 shares.

POLISH OIL OUTLOOK BETTER

In contrast to most Polish industries the petroleum outlook is steadily improving though many concerns still are making scanty profits, Consul D. R. Heath, Warsaw, reports to the Department of Commerce. The industry has made progress in adjusting itself to the stable currency and high taxes. It is believed that in a few years the peak production of 2,000,000 metric tons of crude, attained in 1909, may be approached again. In the first quarter of 1925 gross crude oil production was 198,940 metric tons, 5 per cent over the 1924 quarter.

CALIFORNIA DEALERS MEET

SACRAMENTO, Cal., Aug. 2.—A movement to include the entire Pacific Coast in the Independent Gasoline and Oil Dealers' Association was launched at the opening session of the convention here. The organization, which was formed about six months ago, has been largely confined to northern California and the San Francisco Bay region, but with the arrival of delegates from Washington and Oregon, the extension was put under way. J. E. Dodgen of Vellejo, president of the organization, is presiding. W. J. Keefe is the local president, and A. B. Morris of Oakland is the secretary.

This Single YELLOW STRAND Rotary Casing Line was handling 60,200 Pounds of Drill Pipe at 4,300 feet

Yellow Strand Rotary Casing Lines

Pouf! What's a Mere 30 Tons?

The hole is down below the 4,000-foot mark. The bit needs sharpening. Up with the drill pipe! Zowie! A deadweight of 30 tons on the 1-inch Yellow Strand Rotary Casing Line.

That's not all. The line has even a worse job cut out for it—tugging away at a string of "frozen" casing, which, free, weighs 50 pounds per foot. And this, while the line is bending sharply over sheaves and drums, while it is being whipped and lashed by vibrations.

Yellow Strand has all four qualities which *make* a successful rotary drilling line: Strength and elasticity to carry weights and resist shocks. Flexibility to take the short bends over sheaves. Hardness to prevent crushing on drums.

Write for name of nearest Distributor of Yellow Strand and other B & B Lines. Ask also for Catalog No. K-2.

Broderick & Bascom Rope Company, St. Louis, Mo.

Branches: New York City and Seattle, Wash. *Factories:* St. Louis Mo., and Seattle, Wash.

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SPEND A FEW WEEKS at Morris Ranch, located in the heart of the Rockies on the Cody Road to Yellowstone National Park. Horseback riding, good fishing. Our annual Yellowstone Park tour 22 days horseback and camping leaves August first. Write for particulars. Fred Morris, Cody, Wyo.

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C. M. & St. P. Ry. Boulder Jct., Wis.
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THE ORGANIZATIONS that get the bulk of oil industry orders are those who are known to the industry and who can combine quality with speedy service.
If you had your equipment listed in this section it would receive the same consideration that thousands are giving the good equipment advertised here.

HOTEL HOYT — Sixth and Hoyt, Portland, Ore. Make it your northwestern headquarters. Write for information.

EQUIPMENT WANTED

WANTED—A first-class second-hand portable Star or similar outfit, size 24 to 28, with or without boiler mounted. Write Virginia Machinery & Well Co., 1319 E. Main Street, Richmond, Va.

WANTED—To purchase Reid Band Wheel Power with or without engine. Give description and lowest price. Address Box 123, Tulsa, Okla.

WANTED—Either one or two-eccentric second hand pumping power "cheap." Address P. O. Box 1574, Tulsa, Okla.

WANTED — Fairbanks-Morse oil engine, type Y, 50 to 100 h.p., directly connected to electric generator. Box A-851, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Abandoned pipe lines and other usable pipe of all sizes. P. O. Box 115, McKees Rocks, Pa.

FOR SALE—DOGS

GERMAN POLICE puppies, pedigreed, fancy registered stock only; finest blood lines. Shipped anywhere. 5828 South Grand, Los Angeles, Cal.

BEAUTIFUL registered bull pups cheap. Tonn, 501 Rockwood, Dallas, Tex.

FOR SALE—Great Dane puppies and canaries. Fairview Poultry Farm. North Okmulgee Ave., Okmulgee, Okla.

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QUALITY STATIONERY
125 Hammermill 20-lb. letterheads and 100 envelopes, $1.00; two-color work 25 cents additional. 500 letterheads or envelopes, $2.00. 1,000 Hammermill 20-lb. letterheads, $3.50.
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FOR SALE—EQUIPMENT

DRILLING OUTFITS

OIL MEN
If you are interested in drilling in the San Juan Basin, New Mexico, we can offer you a complete drilling rig cheap. Located near Farmington. Address, P. O. Box 37, Farmington, New Mexico.

FOR SALE—28 Special Star machine with calf wheels, complete equipment and 35 h.p. Oil Well boiler. Box XXX, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—One No. 4 Star Tractor drilling machine; 25 h.p. Oil Well mounted boiler, with tools, jars, stem, bailers, etc. Also ¾ and ½-inch new wire lines. Price, $1,500. Empire Supply Co., Duncan, Okla.

FOR SALE—27 Star Machine with tools and boiler, price $1,500. W. H. Slack, 709 E. Ninth St., phone 2003-W., Coffeyville, Kan.

FOR SALE—One No. 23 Star tractor steam drilling machine, in perfect condition, with full set of tools ready for work. Price, $1,500 cash. W. P. Harley, Bowling Green, Ky.

FOR SALE—Two drilling machines, 3,000′ casing, 800 acres leases, one gas well with good contracting business, Putnam Moran Field; might take some stock in good company with or without my services; fine proposition for new company. Contractor, Box 496, Moran, Tex.

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FOR SALE
Reconditioned Pipe, Casing, and Oil and Gas Well Supplies always carried in stock. Your inquiries solicted. Lee Morrison Supply Co., Bartlesville, Okla.

FOR SALE — 12"—8"—6⅝" casing. Two drilling outfits. Have customers wanting material. List with me. Straight commission. Mutual Co., 217 Ault, Tulsa. Phone 3-7561.

PIPE FOR SALE
We offer the following used gas line pipe for sale:
15 miles 3-inch
20 miles 10-inch
7 miles 12-inch
5 miles 14-inch
Write us for prices.
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FOR SALE — Casing, tools, supplies for sale everywhere. Listed on commission basis. Mutual Co., 3-7561, 217 Ault Bldg., Tulsa, Okla.

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FOR SALE
Modern fully equipped and ready to operate 500-bbl. refinery with 10 acres of land on concrete highway in most prosperous section of the State.
Unusually large year round demand for refined products, making it possible to market entire output locally. The price is right and terms liberal. Wire or write T. J. Holmsley, Box 835, San Benito, Tex.

REFINERY for sale or lease. Great Falls Refining Co., Great Falls, Mont.

ROYALTIES—PRODUCTION

WANT TO BUY—Small producing royalty interests. Columbine Finance Co., Sullivan Bldg., Boulder, Colo.

NEW MEXICO—State oil leases, drilling blocks and royalties for sale. Can block any size tracts wanted in any part of State. Let us be of service to you by letter or wire. Hall & Rawn, 727 First Nat'l Bank Bldg., Albuquerque, New Mex.

YOU have your organization, and can give good service. Does the Billion Dollar Petroleum Industry know it? Have you made it easy for oil men to order from you? If not, the surest and best way to promote the merits of your company is to use The Oil and Gas Journal—the oldest and best petroleum publication in the world.

OIL ROYALTY FOR SALE
Will sacrifice a few sixty-fourths in royalty under and around drilling well at $200.00 per sixty-fourth. Well under contract to go 3,500 feet. Excellent geology. If you mean business, address
A. F. BOUDREAU
P. O. Box 464 Sapulpa, Okla.

J. F. MARION COMPANY
Magnolia Building
Dallas, Texas
Buys and Sells
Texas Royalties
"Ask Us First"

WE OFFER the choicest acreage and royalties in the Garber Field; wire or write. John W. Courtney, 407 N. Grand, Enid, Okla.

FOR SALE — Leases and royalties, Kansas. Have just started a 4,000-foot test in Graham County; the well is all financed to go this depth with heavy California rotary rig. I have close-in and other leases around test for sale at attractive prices, or will sell an interest in some of these leases. Get in while prices are low. Address P. O. Box 876, Kansas City, Mo.

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

FOR SALE—186 acres, six wells with settled production of 12 barrels per day. Lease is well equipped. Price, $1,000 per barrel for net production on pipe line statement. W. P. Harley, Bowling Green, Ky.

SOUTHWESTERN WASHINGTON leases, drilling blocks, royalty on structures geologized by Dorsey Hager. Big companies now covering this field. Two test wells drilling, three more about to start. Pacific Producers, 500 Pacific Block, Seattle, Wash.

FOR SALE—120-acre lease near drilling well in Miller County, Arkansas; 1-16th royalty also for sale. Write J. E. Harrell, 112 W. Broad St., Texarkana, Tex.

A REAL LEASE OPPORTUNITY

I own a number of leases around drilling well on excellent geological structure. Well is now drilling and under contract to go 3,500 feet. Will sell a portion of these leases at $1.50 and $2.50 per acre, beginning one mile from well. Leases will be allotted in the order received. The nearest to the well on the first orders received. Address Room 812, Kennedy Bldg., Tulsa, Okla.

FOR SALE—30 acres Texas oil land, bounded by four great oil fields: Sour Lake, Hull, Saratoga and Batson. Owner must sacrifice. For details write R. E. Derby, 132 Cross St., Dayton, Ohio.

WANT GAS ACREAGE

Want 120 acres close up for a well. Kansas preferred. Near good market. J. Turner, Jackson Hotel, Paola, Kans.

Through the Classified Wants Section you can interest 25,000 oil men in your product or want. Mail your advertisement now for next week's issue. It doesn't cost much!

FOR SALE—Oil lease 100 acres. Between two large producing fields. Kay County, Oklahoma. G. Havens, 910 East 25th Street, Kansas City, Mo.

SOUTHEAST NEW MEXICO

Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.

H. T. ORCUTT

816 Colcord Bldg. Oklahoma City, Okla.

OIL AND GAS LEASES

Marathon Fold—West Texas

12,000 acres University Permits, Pecos County, dated October 1, 1924, 5 years. The new law makes these permits most attractive. Can be subdivided into 40-acre tracts. Near Sun, Gulf, Dixie, California Company, Phillips, Arkansas Fuel, Humble holdings.

10,000 acres Crockett County. Large and small blocks; adjoining big companies; scattered wildcat; also close-in adjoining World well block.

20,000 acres. 10-year leases; low rentals; Terrell County. Getting good play. Watch this county. Prices right.

5 000 acres Upton County. Scattered tracts; blocks for drilling.

60,000 acres, one block Southeast Pecos County, on geological formation. Most attractive as to desirability, price and terms.

2,000 acres, Irion County, 10-year lease; watch the new work here.

12,000 acres, Loving County; 10-year lease, 10-cent rental.

Write for prices and maps. Will allow time for geological inspection.

C. W. WEBSTER

W. T. Waggoner Bldg. Ft. Worth, Tex.

Reference Mercantile Agencies

LEASES—PRODUCTION

HAVE SEVERAL pieces of flush and settled production for sale in Wichita Falls district. Prices very reasonable and terms can be arranged if necessary. Address R. L. Steiner, P. O. Box 1144, Dallas, Tex.

PRODUCTION — 65 barrels, Kansas shallow; first class. Box 653, Kansas City, Mo.

FOR SALE—20 acres in fee, section 27-18-23, Ellis County, Oklahoma. Stephen Stephens, 4549 Westminister Place, St. Louis, Mo.

SOUTHWEST ARKANSAS bargain. Owner selling 40 acres, unimproved, in timber or will lease for oil going. Box A-863, The Oil and Gas Journal, Tulsa, Okla.

WE OFFER you the most attractive prices on Leases in New Mexico. Business investments that will pay from 20 to 75 per cent on every dollar. Alfalfa Farms, Cotton Farms. Free maps of New Mexico oil fields. Sadler Investment Co., Artesia, N. M.

WANT TO SELL 40 acres oil and gas lease; $35 acre, Section 36-8-5, Seminole County, near drilling well. J. A. Crow, Route 3, Maud, Okla.

OIL LEASES and Royalties, Seminole, Pottawatomie Counties. Communicate with I. H. Townsend, Konawa, Okla.

ATTRACTIVE BLOCKS

Have several good big blocks in Western Kansas. Geology by Erasmus Haworth. Liberal terms for a test well. Some of them close to production. Write or wire W. J. Madden, Hays, Kans.

FOR LEASE—Quarter section near Cushing, Okla. Bargain if drilled immediately. O. M. Bundy, Cedar Rapids, Iowa.

PRODUCER OR BROKER

Experienced operators with thorough knowledge of Wichita Falls district, efficient organization, tools, and best of reputation with big companies and banks, desires to form connection to finance the drilling of a number of tests, both wildcat and proven in Archer and adjoining counties; either through the sale of acreage, interests in the wells or stock. Drilling and operating costs in this district are low and there are large areas of untested potential oil land where wells come in from 100 to 1,000 bbls. at from 500 to 2,000 feet. Write operator, 408 Morgan Bldg., Wichita Falls, Texas.

ONE TO FIVE ACRE tracts near Wisdom Dome, Fort Bend County, Texas. Rycade has three rigs running $250 per acre; safe bet. Frank Mashek, McAllen, Tex.

NEW MEXICO

We have an up-to-date map of the entire State of New Mexico, showing producing and drilling wells in each county, with owner or operating company names. This map contains no advertising and a postal card will bring you a free copy. We can also furnish leases in most counties at around $1 per acre. Address:

NEW MEXICAN EAGLE OIL CO.
Farmington, New Mex.

PRODUCING OIL PROPERTY
HIGH GRAVITY OIL

Exceptional opportunity to join with owner in the development of a producing oil property with a cash income of $2,000 a month. Income can be greatly increased by the drilling of additional wells. Seven locations to drill on this property. Three wells just recently completed on adjoining property producing 1,400 bbls. a day; can make very attractive offer to parties with capital to join in the development of this property. For particulars address P. O. Box 252, Glencoe, Ill.

LEASES—PRODUCTION

FOR SALE—LANDS

Attention Oil & Gas Prospectors

The United Lands Co., Inc., own the following land in Louisiana:

In Ascension Parish....	8,495 Acres
St. James Parish.....	235 Acres
Winn Parish	100 Acres
Above lands crossed by L. R. & N. R. R.	
Avoyelles Parish	89 Acres

The Empire Gas & Fuel Co. paid a large rental on the Ascension and St. James Parish lands, drilled two wells and abandoned their lease.

It takes cash and courage to drill 13 dry holes as at Urania, but the 14th struck oil, and it is possible, if not probable, that oil or gas does underlie this Ascension land and that other or deeper wells if sunk may richly reward the effort. One artesian well on this property has flowed for 14 years and is still flowing natural gas.

The Ascension and St. James land is largely cut over swamp land in a solid body, has 16 houses thereon and a five-acre orange bearing grove. Will sell land and improvements, reserving mineral rights, or will lease for oil and gas development.

The Winn Parish tract near Atlanta, La., is high land and not far from the Urania Field.

The land in Avoyelles is cut over swamp, located near the town of Cottonport on Texas & Pacific R. R.

Disposal of land holdings as an entirety is preferred. Call or address

UNITED LANDS CO., INC.

402 Whitney Central Bldg.

New Orleans, La.

LEASES—PRODUCTION

FOR PANHANDLE oil leases and drilling contracts write Dr. W. R. German, Canadian, Texas.

OPPORTUNITY

I am just starting a 4,000-foot test for oil in Graham County, Kansas. This well is all financed to go this depth with heavy California rotary rig and is on good looking structure. I have some close-in and other leases for sale or will sell interests in some of the leases at attractive prices. Get in while these prices are low. Address P. O. Box 876, Kansas City, Mo.

U. S. PERMIT just granted for 1,880 acres on structure in new field, Central Wyoming. Oil and gas in test well, same structure. Full geological report in U. S. Geological Survey Bulletin. Apply direct to owner, Box 269, Casper, Wyo.

ACREAGE NEAR DRILLING WELL

We are drilling deep test 3,300 feet on block where Midland, Glasscock, Upton and Regan Counties meet. Have acreage leases two to three miles from well to sell at $10 to $20 per acre, in plots of 80 to 640 acres. Quick action necessary, July 30, drilling down over 1,000 feet, 5-year 88 form leases, escrow money to bottom of hole or commercial well. Address

J. B. ZIMMERMAN, Trustee

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THE OIL and Gas Journal is read in Peru, China, Africa, Guatemala, Egypt, Alaska, Persia, Roumania, Spain, Switzerland, Czecoslovakia — everywhere. In fact wherever there's oil, there are men reading The Oil and Gas Journal—"The Oil Man's Bible."

1,000 ACRES oil and gas leases in Jackson County, Tennessee. Near the Tinsley Bottom Field. Will sell cheap if taken at once. Write W. H. Boswell, Livingston, Tenn.

SOUTH TEXAS oil leases and drilling contracts on good structure. Write us for full particulars and tell us your wants. Gulf Leasing Co., 525 Brady Bldg., O. C. McLeod, Mgr., San Antonio, Tex.

FOR SALE — Fee in 75,000 acres smooth farming land. One oil well at 1,600 feet. Two railroads. W. F. Beaumont, Hartley Tex.

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REGISTERED PATENT ATTORNEYS
United States and Canada

Before disclosing your invention to anyone send for blank form—

EVIDENCE OF CONCEPTION

Bulletin "How to Establish Your Rights" and complete information free.

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PATENT-SENSE—Free book for inventors seeking largest deserved profits. Write Lacey & Lacey, 718 F. St., Washington, D. C. Established 1869.

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25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

(Continued from preceding page)

POSITION WANTED

MAN WITH years of experience in all grades of producing and drilling. Will accept position, production or charge of drilling. References furnished. Box A-873, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED LEASE foreman wants position with reliable company. Have had 14 years experience in the field. Also experienced in carpenter and concrete work, installing engines and trouble shooter. Married. References. For further information, address 18 N. Lawton, Tulsa, Okla. Phone 2-1230.

I WANT A JOB

Open for any job in an oil office promising a future. Not particular about where I go or what I do.

Four years experience in charge of accounting departments for companies operating production, refineries and stations. Two years training with certified public accountant.

All I seek is an opportunity to demonstrate my ability. Box A-860, The Oil and Gas Journal, Tulsa, Okla.

EXPAND YOUR BUSINESS BOUNDARIES

Sell to the world-wide billion-dollar petroleum industry through The Oil and Gas Journal Classified Wants Section.

It Doesn't Cost Much

	1 Time	2 Times	3 Times	1 Mo.
3 lines	$ .75	$1.20	$1.65	$2.10
4 lines	1.00	1.60	2.20	2.80
5 lines	1.25	2.00	2.75	3.50
6 lines	1.50	2.40	3.30	4.20
7 lines	1.75	2.80	3.85	4.90
8 lines	2.00	3.20	4.40	5.60
9 lines	2.25	3.60	4.95	6.30
10 lines	2.50	4.00	5.50	7.00

Six words usually make a line.
Compute white space at the above rates.

Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

OIL ACCOUNTANT and office manager with eight years' experience in the oil business, both field and office, wants connection with reliable progressive company where ability and hard work will mean future advancement. A high-class young man who possesses the aggressiveness and personality to make a success of whatever he undertakes. Now employed but prospects limited. Box A-867, The Oil and Gas Journal, Tulsa, Okla.

REFINERY BUILDER AND OPERATOR

Experienced, practical constructor and operator, 17 years in petroleum industry, good executive and organizer, low construction and operating cost; desire connection with established company or someone intending to start in the refining business. Can take full charge. Box A-855, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

WANTED — A refinery foreman to handle pipe fitting and construction work. Give references and state salary required. Address E. J. Mary, superintendent Simms Refinery, Dallas Tex.

EXECUTIVE, ENGINEERS, $3,000-$25,000, find our individual, confidential service effective in making new connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not employment agency. Jacob Penn, Incorporated, 305 Broadway, New York City, N. Y.

WANTED

WANTED — Information regarding zinc, lead, antimony, bauxite, sulphur, gold, silver deposits, and oil structures in Oklahoma and Texas. Box A-463, The Oil and Gas Journal, Tulsa, Okla.

WANTED RELIABLE COMPANY or individual for development for oil and gas. Shallow drilling, new sections. No rank wildcatting in Penna. Box A-870, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Experienced oil man to handle fine proposition in storage of crude oil and its products. Big thing for the right man. Address Box 882, Tulsa, Okla.

WANT 20-bbl. shallow oil producing lease in exchange for 413-acre Iowa farm. Chas. Hass, Chariton, Iowa.

WANTED—Good commercial block, on structure, in trend, in Greenwood County, Kansas. Box A-850, The Oil and Gas Journal, Tulsa, Okla.

WANT PARTNER to help develop 145-acre lease high grade Pennsylvania oil; two producing wells; not large enough production to drill fast enough; will last a lifetime. Write for further information. Mosque Oil Corporation, P. O. Box 142, Freedom, Pa.

WANTED—Producing royalties, Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

BUSINESS OPPORTUNITY

WE OFFER from 1,000 to 3,000 acres, Leavenworth County, Kansas, in a proven gas territory, to anyone who will guarantee an oil test. Do not answer unless you mean business. W. R. Taylor, R. F. D. No. 2, Linwood, Kans.

GET MONTHLY CASH DIVIDENS by investing in the particpating shares of a sound seasoned royalty company over five years old. Over 107 cash paid to date. Books close 25th; checks mailed 30th each month. Write E. F. Hyland, 868 Penobscot Bldg., Detroit, Mich.

1,300 FEET industrial trackage, right of way, streets and drives with 5 acres adjoining, close in, Kansas' best oil town. Bargain. W. A. Beaumont, El Dorado, Kans.

WANTED COMPLETE standard rig and casing for interest in 3,500-foot well on closed structure in New Mexico, approved by several well-known geologists. Structure maps and reports for inspection. I have the money to drill the well. Box A-871, The Oil and Gas Journal, Tulsa, Okla.

FLORIDA land, lots, homes; bought, sold, exchanged; no matter where located; write us particulars giving description, price and terms. Bryan Realty Association, Melbourne, Fla.

WILL SALVAGE your old wells, or buy settled production anywhere in Texas. Box A-845, The Oil and Gas Journal, Tulsa, Okla.

OIL PRODUCTION WANTED
OIL SALES—Valuations, management, development and operation of properties in all leading fields. Karl F. Divener, 912 N. Lincoln Ave., Pittsburgh, Pa.

FISHING LOST TOOLS by latest patented process, guaranteeing results within 24 hours, G. J. Tremayne, 1011 Chestnut St., St. Louis, Mo.

BUSINESS OPPORTUNITY

STOCK SELLING

Corporations desiring capital for promotion, development or expansion are invited to communicate with the undersigned.

Courteous considerations; prompt action; established reputation, complete facilities for campaigns of any size.

WILLIAM R. THURSTON

33 West 42nd St. Telephone
New York City Longacre 4990

FOUR UNITS of leases selected with good judgment from 100 to 1,800 acres, in proven and semi-proven territory, for drilling proposition. F. Kiber, Brazoria County, Angleton, Tex.

DO YOU NEED MONEY for organizing or financing oil, mining or other propositions? Phone M 7794, write, 35 E Tenth, Oklahoma City, Okla.

FINANCIAL ASSISTANCE

Furnished covering the installation of Absorption Gasoline Plants to owners of suitable gas leases.

HAMMOND ENGINEERING CORP.

215 First National Bank Bldg.
Denver, Colo.

610 Transportation Bldg.
Los Angeles, Calif.

NEWTON DRILLING COMPANY
Heavy Rotary Equipment, experienced men. Let us drill your wells. Robert Newton, Box 669, San Antonio, Tex.

WANTED—Oil stock issues. Do you need $50,000 to $500,000 for expansion purposes in your oil business?

Our organization is experienced in marketing issues of stock for expansion, consolidation and reorganization of oil companies.

Colorado Bond and Mortgage Corp., 222 Patterson Bldg., Denver, Colo.

H. E. NEWTON
Income Tax Counsellor
Auditing and Accounting
619 E. Okmulgee Muskogee, Okla.

ASSISTANCE needed in organizing small refining company. Ideal location at field, can be installed for $10,000.00. Have arranged for all material. Write C. S. Wood, "Woodlawn," Princeton, Ky.

WE OFFER $100 to any one who will prove the oil seepage here is a fake, leakage from filling station, or poured in by hand. Oil 42 gravity, amber color. For information, address C. N. Daniel, Box 46, Beardstown, Tenn.

AN OPPORTUNITY TO BUILD YOUR BUSINESS

Every week more than 25,000 men in oil fields, refineries, pipe line stations, gasoline plants and supply stores read the advertisements in The Oil and Gas Journal.

These readers are of the highest type and have not only the inclination but also the means to buy in large quantities.

Place an advertisement in the Classified Wants Section so these readers can become acquainted with your products or want. It will help you.

The price is very reasonable. It costs but 25 cents a line for the first insertion and 15 cents a line for each additional insertion. A five-line advertisement can be run a month for $3.50.

CLASSIFIED WANTS SECTION

ORCHARDS AND FARM LANDS

HUNTING AND FISHING

Wonderful 720 acre subirrigated stock farm in Woodward County, Oklahoma; 200 acres cultivated, fine meadow, extra good improvements, beautiful shade trees, running spring water all over place, deep spring lake full of game fish, ducks, quail and squirrels; 320 acres hog-tight, some alfalfa creek bottom land, all varieties fruit, cherries, apples, apricots, pears, peaches, grapes, persimmons, walnuts. This place must be seen to be appreciated. For sale or trade for income. Prices right. Moser Stock Farm, Sharon, Okla.

5 CENTS AN ACRE CASH

Texas school lands for sale by the State at $2 per acre; 5 cents per acre cash, balance in 40 years; 5 per cent interest. Send 6 cents postage for further information.

INVESTORS PUBLISHING CO.
Dept. O. San Antonio, Tex.

FOR SALE—120-acre valley farm in high state of cultivation, fenced and cross fenced, spring watered, public road, rich soil, six acres timber, 4-room house, 2 miles good market town, 1 mile to school and church, fine, well developed neighborhood, large barn and outbuildings, ideal for dairying and poultry. Sacrifice price $40 per acre, with $500 cash, rest time at 6 per cent interest. 80 acres blue grass and clover. W. D. Blankenship, Buffalo, Mo.

FOR SALE—12,000 acres well watered and improved. Ideal ranch and home. Drilling near. $7.50 an acre.
M. F. BEAUMONT
Hartley, Tex.

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

INCORPORATIONS

DELAWARE incorporators. Charters, fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

FOR SALE—MAPS

ABSTRACT MAPS
Copyrighted

Gives lease and royalty owners, addresses, expiration date, oil development, Government bench marks, and complete information on restricted Indian lands. Made in township units. As map gets out of date it may be exchanged for new one showing all changes in ownership and development for one-tenth original cost. Covers all live areas in Oklahoma and Kansas.

Famous throughout the oil fields.

MID-CONTINENT MAP COMPANY
Dept. A., Bank of Commerce Bldg.
Tulsa, Okla.

THE RESULT producing benefits of THE OIL AND GAS JOURNAL Classified Wants Section are helping the men of the industry to get the maximum good out of their equipment.

Good machinery, equipment, etc., is being kept in operation by reason of alert men buying and selling through the Classified Wants Section.

FOR SALE—New geological map of Southeast New Mexico showing Artesia oil field and wildcat developments. Cross-section and log. Price $1 postpaid. E. R. Lovewell, geologist, Artesia, N. M.

BUREAU OF MINES STATISTICS ON REFINED OILS FOR JUNE

Compiled by G. R. Hopkins, Petroleum Economist

During June, reports were received from 311 refineries, with an aggregate daily crude oil capacity of 2,520,000 bbls. These refineries ran to stills 64,847,000 bbls. of both foreign and domestic crude oil while operating at 86 per cent of their rated capacity. This constitutes a record figure for oils run to stills, it being an increase in daily average of 7 per cent over the previous record figure of May, 1925, and of 29 per cent over that of June, 1924.

The increased runs to stills were reflected in record production figures for gasoline and gas and fuel oils. Gasoline production for the month amounted to 944,000,000 gallons, a daily average of 31,470,000 gallons. This represents an increase of 6 per cent over the previous month and of 28 per cent over June, 1924.

Domestic consumption of gasoline during the month set a new record of 868,000,000 gallons, a daily average of 28,940,000 gallons. This represents an increase of 7 per cent over the previous month and of 27 per cent over June, 1924.

Stocks of gasoline at the end of the month amounted to 1,695,000,000 gallons, a decrease during the month of 22,000,000 gallons. Assuming that imports, exports, and domestic demand will remain constant during July, these stocks represent 55 days' supply. This compares with 61 days' supply on hand a month ago.

The consumption of kerosene continued to drop and stocks were increased 20,000,000 gallons.

The production of gas and fuel oils during the month amounted to 1,360,000,000 gallons. As mentioned above, this is a record figure, it being an increase of 10 per cent over the previous month.

The consumption of lubricants registered a sharp increase during the month, its total of 87,000,000 gallons representing an increase of 30 per cent in daily consumption.

Stocks of wax at the refineries continued their slow increase, totaling 110,400,000 pounds at the end of the month as compared to 109,800,000 pounds on hand May 31, 1925. Both domestic demand and exports of wax fell off during the month.

COMPARATIVE ANALYSES, JUNE AND PRECEDING MONTHS, 1925

	Production	Imports*	Exports*	Stocks End of Period	Domestic Demand
Gasoline (gals.):		January 1, 1925		1,298,925,717	
January	831,652,370	14,447,766	98,961,932	1,453,197,498	592,866,423
February	790 441,679	12,033,151	103,141,310	1,618,891,490	533,639,528
March	853,574,314	14,542,865	123,755,783	1,747,198,589	616,054,197
April	860,492,115	10,241,315	109,750,499	†1,720,877,152	†787,304,368
May	922,046,254	16,945,275	101,159,037	1,716,921,722	†841,787,922
June	944,175,287	16,127,687	113,668,820	1,695,216,272	868,349,604
Kerosene (gals.):		January 1, 1915		361,927,270	
January	247,726,852	72,740	70,347,841	394,638,163	144,740,858
May	202,559,475	553,487	57,587,038	452,808,655	127,390,987
June	193,663,519	106,989	69,673,383	472,370,819	104,534,961
Gas, fuel oil (gals.):		For United States		East of Calif.	
January	1,171,402,042	44,246,327	103,091,940	773,853,375	
May	1,274,464,859	45,776,091	151,274,021	946,781,536	
June	1,360,385,855	69,220,826	143,593,612	1,082,056,430	
Lubricants (gals.):		January 1, 1925		269,674,642	
January	103,164,250	58,147	39,755,293	280,158,610	52,883,136
May	109,183,815	445,890	38,503,772	292,112,071	69,018,340
June	104,535,090	249,367	31,333,717	278,610,332	86,952,479
Wax (lbs.):		January 1, 1925		89,705,846	
January	54,310,455	1,029,814	31,928,829	89,006,347	24,110,939
May	50,269,130	3,778,799	22,255,157	109,821,714	25,280,933
June	43,348,475	1,411,555	22,071,072	110,383,659	22,127,013

*From Bureau of Foreign and Domestic Commerce. Exports, except for crude oil and wax, include shipments to Alaska, Hawaii and Porto Rico.

†Revised, due to the addition of 10,000,000 gallons to Louisiana Gulf Coast April stocks.

REVISED STOCK FIGURES FOR JANUARY 1, 1925

Resultant from new definition of California stocks as described in May refinery report.

	California	United States
Refinable crude, 20° and above (bbl.)	40,468,496	
Heavy crude, below 20°, including all grades fuel oil (bbl.)	51,897,823	
Natural-gas gasoline (bbl.)	30.096	
Tops (bbl.)	10,337.705	
Unfinished oil (besides tops) (bbl.)	5,258,472	
Unfinished oils, includ'g Calif. tops and natural-gas gaso., (bbls.)		35,385.468
Gasoline, including engine distillate (gals.)	431,398,184	1,298,925,717
Kerosene (gals.)	65,299,961	361,927,270
Lubricants (gals.)	32,912,206	269,674 642
Wax (lbs.)	53,108	89,705,846
Asphalt (tons)	17.015	97,259
All other finished products (gals.)	11,317,363	46,712,005

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES June, 1925

Oils run to stills (bbls.):	Crude Oils—Domestic	Crude Oils—Foreign	Unfinished Oils	Natural-Gas Gasoline	Total Oils Run to Stills
East Coast	9,282,840	1,962,810	615,978	294,300	12,056,928
Appalachian	2,157,915	.....	55,590	30,965	2,244,470
Indiana and Illinois	5,811,116	.....	234,609	92,123	6,137,848
Oklahoma and Kansas	8,892,036	.....	388,554	249,253	9,529,843
Texas	11,685,294	661,695	483,072	286,993	13,117,054
Louisiana and Arkansas	4,941,405	1,361,759	146,412	62,731	6,512,307
Rocky Mountain	2,268,348	.....	754,314	82,367	3,105,029
California	15,822,226	.....	*240.947	339,695	16,402,868
Total U. S.	60,861,180	3,986,264	2,820.476	1,438,427	69,106.347
Daily average	2,028,706	132.875	94,016	47,948	2,303,545
Daily average 5/'25	1,876,352	135,918	105,502	49,380	2,167,152
Texas Gulf Coast	8,529,981	661,695	293,216	246,880	9,731,772
Louisiana Gulf Coast	3,461,261	1,361,759	87,963	.....	4,910,983
Output and losses:	Gasoline (gals.)	Kerosene (gals.)	Gas and Fuel Oils (Gals.)	Lubricants (Gals.)	Wax (Lbs.)
East Coast	155,152,831	45,634,708	206,077,678	31,290,819	16,493,194
Appalachian	35,712,726	11,257,059	22,021,030	15,511,481	6,273,834
Indiana and Illinois	128,700,621	21,128,146	67,336,450	8,556,645	7,243,825
Oklahoma and Kansas	180,810,396	33,273,132	148,426,390	8,663,644	3,529,320
Texas	185,260,172	37,257,978	244,813,361	26,517,254	4,499,439
Louisiana and Arkansas	53,361,415	19,895.912	167,388,300	2,558,615	2,546,060
Rocky Mountain	54,181,913	7,333.761	40,271,657	2,061,526	2,762,793
California	150,995,213	17,882,823	464,050,989	8,375.106	.....
Total U. S.	944,175.287	193,663,519	1,360,385,855	104,535,090	43,348,475
Daily average	31,472,509	6,455.451	45,346,195	3,484,503	1,444,949
Daily average 5/'25	29,743,428	6,534.177	41,111,770	3,522,059	1,621,585
Texas Gulf Coast	134,116,303	29,392.672	180,142,735	24,745,693	4,205,505
Louisiana Gulf Coast	41,168,840	17,182,299	121,146,309	2,267,765	2,546.060
	Coke (Tons)	Asphalt (Tons)	Other Finished Prod. (Gals.)	Unfinished Prod. (Gals.)	Losses (Bbls.)
East Coast	16,118	121,524	8,467,119	3,977,298	516,285
Appalachian	1,343	.....	1,674,390	1,393 031	128,300
Indiana and Illinois	20,696	17,176	8,404,894	1,879.063	253,731
Oklahoma and Kansas	8,356	286	2,466,686	8,174,810	370,634
Texas	20,894	41,958	161,047	22,073,859	486,312
Louisiana and Arkansas	10,929	35,203	6,295,603	8,252,807	108,404
Rocky Mountain	8,339	4,807	31,974	20,768.754	46,176
California	.....	42,069	4,491,973	*24,722.868	203,627
Total U. S.	86,675	263,023	31,993,686	91,241,490	2,113,369
Daily average	2,889	8,767	1,066,456	3,041,383	70,446
Daily average 5/'25	2,831	8,413	1,158,195	3,402,150	64,522
Texas Gulf Coast	19,221	41,124	4,655	10,385,978	387,770
Louisiana Gulf Coast	10,154	34,520	6,123,794	4,753,132	66,133

*Includes 189,369 barrels net tops produced.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—JUNE, 1925

(Gallons)

District—	Straight Run	Pct.	Cracked	Pct.	Natural Gas Gasoline	Pct.	Total
East Coast	97,350,815	63	45,441,445	29	12,360,571	8	155,152.831
Appalachian	27,104,769	76	7,416,892	21	1,191.065	3	35,712.726
Indiana and Illinois	73,282,129	57	51,551,094	40	3,867,398	3	128,700.621
Oklahoma and Kans.	127,066,362	70	43,287,210	24	10,456,824	6	180.810,396
Texas	106,806,940	58	66,444,044	36	12.009,188	6	185,260,172
Louisiana and Ark.	37,063,450	69	13,679,661	26	2,618,304	5	53,361.415
Rocky Mountain	26,577,824	49	24,291,786	45	3,312,303	6	54,181.913
California	135,944,605	90	783,418	1	14.267,190	9	150,995.213
Total U. S.	631,196,894	67	252,895,550	27	60,082,843	6	944,175.287
Total U. S. 5/'25	613,653,754	67	244,241,621	26	64,150.879	7	922,046.254
Texas and Louisiana Gulf Coasts*	97,629,377	56	67,286,740	38	10,369,026	6	175,285.142

*Included above under Texas, Louisiana and Arkansas.

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES

JUNE 30, 1925

District—	Gasoline (Gals.)		Kerosene (Gals.)	Gas and Fuel Oils (Gals.)	Lubricants (Gals.)
East Coast	354,948,348	.....	96,369,290	261,920,073	95,761,994
Appalachian	34,438,579	.....	12,595,729	32,650,036	36,361,001
Indiana and Illinois	197,254,683	.....	54,173,842	49,760,714	27,042,022
Oklahoma and Kansas	157,878,838	.....	35,339,562	160,507,110	16,193,842
Texas	202,493,812	.....	122,611,621	356,328,328	57,075,212
Louisiana and Arkansas	174,399,399	.....	59,712,139	177,346,915	5,367,386
Rocky Mountain	142,342,215	.....	15,074,398	43,543,264	5,962,843
California	431,460,398	.....	76,494,238	.....	34,846,032
Total U. S.	1,695,216.272	.....	472,370,819	1,082,056,430	278,610,332
Total U. S. 5/31/'25	1,716,921.722	.....	452,808,655	946,781,936	292,112,071
Texas Gulf Coast	184,997,154	.....	106,917.446	286,693,325	65,058,303
Louisiana Gulf Coast	169,546,937	.....	58,949,483	150,766,474	4,625,246
	Wax (Lbs.)	Coke (Tons)	Asphalt (Tons)	Other Finished Prod. (Gals.)	Unfinished Oils (Bbls.)
East Coast	47,253,432	20,179	71,105	13,611,518	7,786,602
Appalachian	19,146.563	1,095	85	2,223,356	1,049.193
Indiana and Illinois	18,064,060	15.567	11,269	14,926,047	3,282,794
Oklahoma and Kansas	2,783,030	29,988	247	4,631,230	2,093.709
Texas	10,625,727	59,858	12,397	390,265	7,221.618
Louisiana and Arkansas	2,973,015	38,680	17,697	2,672.164	2,019.197
Rocky Mountain	9,436,311	26,208	8,338	381,303	1,811.566
California	107,521	.....	20.549	8,102,252	*12,841,658
Total U. S.	110,383,659	191,575	141,687	46,888,135	38,104,337
Total U. S. 5/31/'25	109,821,714	165,896	151,617	50,641,735	37,347,667
Texas Gulf Coast	10,531,737	57,720	12.397	28,850	6,614,722
Louisiana Gulf Coast	2,973,015	35,430	17.654	1.172,164	1,789,808

*Includes 613,932 barrels tops in storage.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

	Month of June—1924	Month of June—1925	12 Months Ended June—1924	12 Months Ended June—1925
Crude petroleum ..... Gals.	63,718,297	51,958,494	787,716,463	621,175,080
$	2,460,145	2,368,181	26,342,596	23,969.246
Total refined petroleum ..... Gals.	364,438,566	336,946 936	3,647,781,312	3,924,810,437
$	39,650,168	36,023.513	357,263.562	397,425,400
Gasoline, naphtha and other light products ..... Gals.	115,999,301	111,726,325	1,035,875,520	1,220,625,155
$	18,454,826	17,975,716	161.175,341	175,517,050
Illuminating oils ..... Gals.	81,476,093	69,346,282	882,602,870	893,240,629
$	8,315,901	6,758,785	80,516,405	85,486,307
Gas and fuel oils ..... Gals.	133,706,470	124,780,472	1,361,122,655	1,433,542,658
$	4,703,819	4 644,779	41,613,640	52,046,697
Lubricating oils ..... Gals.	33,256,702	31,093.857	368,180,263	377,401,995
$	8,175,622	6,644,233	83,948,176	84,375,346
Paraffin wax ..... Lbs.	29,259.178	22,071,072	367,645,169	332,819,706
$	1.533,057	1.211,014	14,827,592	17,930.278

Improved All Steel

Semi-Automatic

Tubing Spider

Improved All Steel Semi Automatic Tubing Spider fits any standard casing head without complicated or cumbersome holding devices.

Self centering and self-contained throughout; easily handled.

Sold by supply houses in all fields throughout Mid-Continent and Gulf Coast territories.

HOUSTON PUMP & SUPPLY CO.
Houston, Texas

BRADFORD'S SONS HAVE BEGUN HOME TREK

(Continued from Page 22)

first discovered in Oklahoma that they are anxious to see the place and to meet the rest of the population.

Texas and Kansas will be represented on the special train by former Bradfordites who will come from those states to Tulsa to enjoy the unique experience of going home en masse.

A Representative List

If it were possible to have all the ex-Bradford oil men present at one time the crowd would look like a convention of the American Petroleum Institute. Such a gathering would include Fred H. Hillman, of San Francisco, vice president of the Standard Oil Co. of California; Thomas A. O'Donnell, Los Angeles, chairman of the board of the California Petroleum Corp.; Thomas J. Donoghue, Houston, Tex., vice president of The Texas Co.; R. A. Griffith, Tulsa, president of the Sinclair Oil & Gas Co.; John R. Manion, Tulsa, president of the Sinclair Pipe Line Co.; J. H. Evans, Tulsa, president of the Devonian Oil Co.; the Denman brothers, of Sedan, Kan., successful operators in the Chautauqua County fields; John H. Markham, Jr., producer and banker, who "cleaned up" in the Cushing Field and made another fortune since by wise operations; Herbert R. Straight, Bartlesville, Okla., vice president and general manager of the Empire Gas & Fuel Co.; P. M. Miskell, Tulsa, general manager of the Empire Refineries; Thomas Chestnut, Tulsa, of the Chestnut & Smith Corp., among the world's largest manufacturers of natural gasoline; Charles P. Quinlan, Tulsa, treasurer of the same company; L. W. Young, Pittsburgh, president of the South Penn Oil Co., the largest of the Eastern group of Standard producing companies; A. A. Armstrong, Pittsburgh, general manager of the Union Natural Gas Corp.; Ambrose Donoghue, Houston, Tex., secretary and treasurer of the Texas Pipe Line Co. of Texas; Martin Moran, Tulsa, head of the Texas Pipe Line Co. of Oklahoma; Elmer E. Smathers, New York, multimillionaire capitalist, oil producer and manufacturer of oil field supplies; Ray Collins and Burt Collins of Tulsa, president and secretary and treasurer, respectively, of the Echo Oil Co.; E. A. Durham, president and A. C. Jackson, vice president of the Tri-County Gas Co., Wiser Oil Co. and other oil interests with headquarters in Sisterville, W. Va.; Charles Schumacher, Pittsburgh, late president and general manager of the Crescent Pipe Line Co., recently retired; E. R. Shepard, Oil City, Pa., vice president and treasurer of the Eureka Pipe Line Co. and the Southwest Pennsylvania Pipe Line Co. and treasurer of the Cumberland Pipe Line Co.; L. C. Longaker, Oil City, Pa., treasurer of the National Transit Co.; James K. Crawford, Tulsa, president of the Brothers Oil Co.; John M. Crawford, president, and David B. Crawford, secretary and treasurer of the Parkersburg Rig & Reel Co., Parkersburg, W. Va.; John M. Wilson, Toledo, Ohio, president of the National Supply Co.; Joseph T. King, Okmulgee, president of the Kingwood Oil Co.; Charles L. McMahon, millionaire operator in the Okmulgee Field; William L. Connelly, Casper, Wyo., vice president of the Mammoth Oil Co.

While the above in itself is a very representative list, it does not include all that should be in it. It was simply picked from the writer's memory and is here given to show, in a way, the quality of oil men that were bred in the Bradford Field. They won't all be there for the celebration, but most of them are expected to make the pilgrimage, together with hundreds of others engaged in the oil business either as producers, drilling contractors or in positions of responsibility in oil and gas corporations, who once called Bradford home.

While every day throughout the week will be a feature day, the most interesting to oil men will be Wednesday, Oil Men's Day, when a mammoth petroleum parade will be staged which will be led by the Mid-Continent contingent.

An elaborate formal program has been prepared by the general committee but the program does not "tell the half of it." The big kick to be enjoyed in going back to Bradford will be in the countless little sessions not listed by the general arrangements committee. Bradford hospitality cannot be confined to a program, and will find its outlet in divers and sundry ways known to a people who have a great capacity for enjoyment. They always knew how to live well and to entertain heartily in Bradford and those who did not care to wander from the shadow of Quintuple Hill and Mount Raub, or go too far away from Murty's Grove and the Bradford Club, have not lost the knack of hospitably entertaining the home comers. Bradford is a summer resort for many Southwestern oil men and their families, attracted there partly by the marvelous summer climate and partly by the strong affection they have for the old home town. These will all be there for Old Home Week and the vanguard has already arrived, according to the Bradford newspapers.

Bradford a Wealthy City

Bradford is not a moribund oil town. It has more money in its banks and more money invested in the oil business now than ever before. The field is on a 100,000-acre structure and even though it is 50 years old 100 strings of tools are constantly at work and each month sees approximately 100 new oil wells completed. It took Bradford 40 years to realize that it was there to stay, but in the past 10 years a great change has taken place in the city. Old hastily-built wooden structures have been torn down and handsome commercial buildings, banks and private residences erected in their place. Bradford's natural setting is one of the most beautiful in the East.

Future of the Field

The Bradford Field has produced over 240,000,000 bbls. of crude oil above 42 gravity and high in lubricating quality, but it is promised at least another 50 years of life, and Government geologists recently declared that its sand contains somewhere around 2,000,000,000 bbls. of oil which only needs engineering genius to find a means of extracting it. Bradford oil producers of the present day have no reason or desire to go elsewhere to make money. They have a surer road to riches at home than the oil industry offers anywhere else and are developing it as carefully as a mother rears a child. The thrills of the newer fields are absent, but the slow investment return is absolutely dependable. Some successful young oil operators in the Bradford Field have never seen a big well and are only passively interested in the struggle for fortune in the fields of gusher production but hazardous operation, but they know their own game thoroughly and play it with the limit off. Many oil men who sold their holdings in the Bradford Field years ago went broke in other fields. The stay-at-homes who picked up the bargains and remained with them are now sitting on top of the world.

The writer ventures to say that Old Home Week visitors will enjoy the time of their lives and those who for one or another reason cannot be there will have something to regret.

STOCK SALE DEFEATS PROFIT SHARING PLAN

(Continued from Page 23)

but would purchase additional shares outside. Perhaps the stress of personal finances may account for most of the failures to do this. But we all know there are different degrees of stress. One may face situations where it is impossible to obtain money, and nevertheless live on. We often surprise ourselves by what we can accomplish in such emergencies. The truth doubtless is that some have sold their stock to avail themselves of luxuries. This is their right, without question, but at the same time the facts have a bearing. If the plan does not produce thrift it is a failure to that extent. If making it possible for employes to obtain stock at a low price and on easy terms does not have the effect of keeping them interested in the business the partnership might as well be dissolved.

May Reduce Allotments

Other companies confronted by the same problem have undertaken to deal with it in various ways. One method is to allow special or extra dividends on stock held by employes after a certain number of years. But it is hardly probable that our company will ever consider favorably anything of that kind, which is easy to understand in view of the liberality shown by this company in the quantity of stock allotted and the price of the stock. On the contrary, it is more likely that a rule will be adopted cutting down future allotments to employes in proportion as they have failed to hold the stock already received. The justification for a rule of that kind would lie in the mutuality of the plan itself. When the employe does not think enough of the stock to hold it the company may naturally refrain from making additional shares available. It must be remembered that the concession made in the price of the stock constitutes no part of the employe's compensation; hence there would be no injustice in such course. If the straight salary or wage is not fair the remedy would be adjustment, no stock. And the non-saving employe, in the natural order of things, might be the one to face an adjustment downward.

Why does any employe sell his stock? Passing the matter of personal necessity, the answer is not easy. If it were fully realized that the earning power of the company is increasing from year to year, that the yield in dividends is greater than in any other large and seasoned company of its kind, and that at some time in the future the stock is certain to sell on a basis commensurate with the earnings, there would be no haste to sell, except in absolute emergencies, and many apparent emergencies would fade away. An advance of a few points would tempt no one. The tendency to sell, as displayed in the organization, would indicate on its face a lack of belief in the company. Yet that is not the truth. Members of the organization from the highest employe to the lowest believe in the company and its future. They believe in its stability and its earning power. They believe that the stock at present is selling too low and that eventually it will come into its own. Still, some cannot resist the urge to cash in. They reflect upon the fact that the stock cost them only par and is selling for double that even now, leaving out of view its actual value. Would it not be a better policy to resolve firmly against the sale of any stock, at least until the end of the service, with the thought that by such time the holding will amount to something? That is the way to accumulate. And it is the way to show loyalty and appreciation.

The plan, as now in force, provides for three years trusteeship, during which allotted stock cannot be sold. Longer trusteeship is undesirable, save as an incident to the purchase price obligation. The remedy must be found elsewhere. It is hoped that it may not become necessary or seem advisable to discontinue our plan.

INTELLIGENT SELLING OF OIL PRODUCTS

(Continued from Page 23)

many special uses to which they are put.

Lubricating oil is as essential, if not more so, than is gasoline. Yet the growth of the lubricating oil business is as much a triumph of honest salesmanship as anything else. The requirements of each particular engine or machine are carefully studied and the proper oil developed. Each grade of oil is given a classification commonly understood by the user.

Prices of lubricants have been much more stable than prices of other petroleum products. In connection with the business of selling lubricating oils, we take the liberty of quoting from an address made in May, 1923, by Edward Prizer, chairman of the Board of the Vacuum Oil Co., one of the principal markets of lubricants in the world:

"Forty years ago sperm oil was the standard of lubrication, and it justly merited its reputation because of its physical and chemical characteristics. It covered the whole range of the then existing need, from a clock to a steam cylinder.

"This oil, together with other fixed oils, such as whale lard and castor, were in general use and greatly preferred. No single petroleum lubricant could cover the wide range of any one of them, and machinery operators, being accustomed to the use of one oil for all classes of service, were very reluctant to adopt several grades, even though fitting the lubricant to the particular work resulted in larger economies of power and cost.

"The great development in mechanical industry, however, brought the petroleum lubricant into the place it now occupies. The early trouble of the dynamo were caused by lubrication difficulties, particularly since fixed oils were totally unsuited for such use, and when George B. Selden, sometimes called the 'Father of the Automobile,' was experimenting with his engine, his real trouble was the problem of lubrication, which was solved only when he found a suitable petroleum lubricant.

"At the present time gasoline overshadows in the public mind all petroleum products, but it is conceivable the internal combustion engine could function without it. In spite of the Eighteenth Amendment, nature still distills ample supplies of alcohol, and in several foreign countries this product is coming into use, and in some of them—as France, for instance—by compulsory legislative enactment. An English chemist has produced a satisfactory grade of gasoline from coal, by distillation and cracking processes. Some at present unknown application of radio-activity may bring into use some day an entirely new method of propulsion. In any event, there are ample supplies of gasoline in sight for all requirements for a long time to come. The steady improvement in cracking methods employed by refiners is securing larger and larger quantities of gasoline from a given volume of crude oil.

"However, as long as metal revolves on metal, no lack of a separating and friction-reducing fluid is thinkable. Today the wheels of all industry the world over revolve upon petroleum. The day may come when the lubricating qualities of petroleum will be the real vital need of our civilization, and will have to be conserved with judgment and care, lest mechanical operation comes to halt for lack of lubricating substance. The vast expansion of mechanical operation is calling for larger and larger quantities of lubricants, and there is nowhere in sight any substitute for petroleum in this particular."

Superior selling methods, including personal salesmanship, advertising and so on, have had perhaps a dominant part in the development of the lubricating oil trade. The reward, as Mr. Prizer's words indicate, has been remarkable growth and permanent establishment of crude oil as a lubricant over other raw materials.

Sales departments will do well to study lubricant sales methods, despite the intrinsic differences between the uses of lubricating oil and gasoline or other products of petroleum.

Fuel Oil

Fuel oil, while it has "arrived" to a certain extent, is the coming product of the petroleum business, for its consumption as to quantity promises to outstrip anything the oil business has ever before dreamed of. Intelligent sales methods will bring fuel oil into its proper place in present day civilization, for it serves for both heat and power. Opposite methods will turn many prospects away and stunt its natural and proper development.

The problem of selling fuel oil, however, can be resolved into a "mass" problem, rather than one of individual effort, although the latter is also necessary. The oil business as a whole must determine its attitude toward oil-burning and stick to it. The divergence of opinion as to the advisability of using crude petroleum in competition with coal must first be decided by all concerned, after

which sales can be pushed accordingly. Here is an opportunity for the oil business to act in unison for the benefit of both the industry and consumer.

It is evident that salesmanship with regard to fuel oil will depend upon the closest liaison between selling and production end of the business, and that therefore the problem will be more complex than is the case with regard to other petroleum products.

The supply of fuel oil must be adopted to the demand and this can only be done through absolute sales efficiency. By this is meant fuel oil in as large quantities as can be consumed must be supplied at low cost and yet at a price yielding fair profits to the oil business. In other words, the supply cannot be enlarged by excessive price increases in fuel oil due to competition with coal, but nevertheless an increase in the supply will be necessary. It will be made possibly by reducing porduction, transportation, manufacturing and selling costs.

Large scale production will have to go hand in hand with fuel oil sales and stocks will have to be built up to create confidence in the supply. The visible supply must be augmented by an assurance that plenty of additional oil can be recovered from below ground as it is needed. Such an assurance has always been lacking in the oil business, but the time has come, in the belief of oil leaders, when the oil business must dissipate all fears of an "oil shortage." Once this is accomplished, the work of the efficient salesman is just begun.

PRESIDENT'S OIL BOARD CLOSES PETROLEUM QUIZ

(Continued from Page 24)

branches of the industry, will be invited to discuss publicly their views and offer suggestions for the conservation or best use in the future of the nation's oil reserves.

While the industry itself has been at work making a complete survey of conditions within its own sphere, the Government likewise has collected considerable data bearing upon its own responsibility insofar as it relates to the petroleum situation. The War Department, the Navy Department, the United States Shipping Board, the Federal Trade Commission, the Department of Justice, the Geological Survey, all have cooperated with the board in its inquiry. Also, the general counsel of the board has exhaustively covered every legal aspect of the situation, and this legal survey will be of material assistance to the board in its effort to arrive at a definite and impartial conclusion as to what should or should not be done to enhance the interests of Government and industry.

A Constructive Policy

The annual production of oil in the various fields, as reflected in confidential monthly reports made to the Government by law; the pipe line capacity, storage and general related conditions; the normal annual requirements of the Army and Navy, the prices paid, and the prices paid, and the standards of oil required; the fuel needs of the Shipping Board and prices paid; the comprehensive findings of the Federal Trade Commission and similar data is now before the board, and all of this material, together with the data supplied by the industry itself, is to be studied carefully and openmindedly with a view to reaching a conclusive policy which will tend to stimulate greater prosperity in the industry, result in greater stability, establish more uniform and efficient methods all along the line from production to utilization, and, at the same time, enable the Government to know that it is employing the best possible principles of economics both in relation to its own responsibility and the responsibility of the oil industry.

Secretary Work is of the opinion that the work of the advisory committee will not be completed for at least two months insofar as its labors relating to the industry's letters are concerned, and that the public hearing cannot be arranged until some time in October at the earliest. This whole inquiry, to be complete, fair and honest, the Secretary said, cannot be rushed to a termination if the Government is to do proper justice to its task.

Secretary Work's Commendation

"There is just one thing that the public should know," Secretary Work said, "and that is that the oil industry, almost as a whole, has realized that this inquiry by the Federal Oil Conservation Board, has been and will continue to be conducted with but one object in view—to arrive at a policy that will be helpful, stimulating, productive of lasting benefits to the Government and the industry alike. There have been some elements of the industry, an infinitesimal minority, however, which have preferred seemingly not to evidence the clearer vision of the greater majority, but this small element, I am convinced, will in time come to the realization that the oil board is motivated by sincerity and impartiality, and, also, will realize that where mutually beneficial results are desired hesitant cooperation is not conducive to such ends. The heads of practically all of the most important corporations have seen an opportunity to present to the board frank opinions and views, and I will say that these views are worthy and constructive, and the board values them and is appreciative of the spirit of helpfulness evidenced by these progressive leaders of a great industry. Where they have felt that the industry itself is lacking in certain respects, they have said so; where they have felt that the Government is inconsistent or impractical in its relationship, they have said so, and they have given their reasons pro and con. Althogether, they have been frank, to the point, logical, and have rendered a real service. When a great industry deals thus frankly with a Federal agency then, and then only, can beneficial and lasting results be accomplished."

California's Average Gasoline Consumption Shows Big Increase

SACRAMENTO, Calif., Aug. 1.—California motorists consumed 18,000,000 more gallons of gasoline during the second three months of 1925 than during the first quarter of the year, a report made public by M. D. Lack, secretary of the State Board of Equalization, shows.

During the quarter the distribution of gasoline in the State totaled 190,832,753 gallons, as compared to 172,449,869 used in the first three months of 1925. Lack expects an even larger increase for the next three months due to summer motoring.

The 2 cents per gallon tax which the State will collect on the second quarter's business totals $3,816,655, half of which goes to the counties for highway maintenance work.

The gasoline distribution in gallons by the larger companies of California was as follows: Standard Oil, 57,610,440; Shell, 31,587,597; Union, 23,287,513; Associated, 22,303,954; Richfield, 19,824,236; General Petroleum, 6,219,013. The smaller companies sold approximately 30,000,000 gallons.

JAPANESE NAVY BUYS OIL IN CALIFORNIA

LOS ANGELES, Cal., Aug. 2.—Three steamers of the Japanese Navy were in port simultaneously at Los Angeles Harbor this week loading out a total of 200,000 bbls. of fuel oil for the Japanese Naval base at Tokuyama. On last Saturday the Japanese merchant tanker Kiyo Maru sailed with 70,000 bbls. of petroleum, while the tanker Manju Maru, of the Suzuki fleet, is due to load 75,000 bbls. for the same port, making a total of 345,000 bbls. of California petroleum going to the Japanese Navy within four days.

Practically the entire fuel supply of the Japanese Navy will come from this port for at least the next two years under present contracts, it was reported in shipping circles. Conversion of the older section of the Japanese Navy from coal to oil-burning vessels is responsible for the increase in California oil export, it was said.

Five vessels under the Japanese flag were in port, including the four tankers and the new motor liner Akagisan Maru, here from Yokohama in inauguration of the trans-Pacific service of Mitsui & Co. The Akagisan Maru is the first Diesel-driven vessel to be built in Japan.

NEW RUSSIAN OIL PORT

Russia has decided to build at Touapse on the Black Sea, a special oil port in order to facilitate the loading of big ocean steamers with oil for export. The bulk of Russian oil export is now concentrated at Touapse. The long discussed project of building an oil tunnel from Gronzy to Touapse has been approved by the State Planning Commission. It is expected work will begin this year, and the tunnel will be complete by 1928.

TANK WAGON AT NEW HIGH MARK IN FIFTY CITIES ON AUGUST 1

For the third consecutive month the average tank wagon price of gasoline in 50 representative cities of the country has shown a steady increase and on August 1 another new high mark for the year was reached. The average price on August 1 was 19.587 cents, an increase of .34 cent over the average of July 1, which was 19.247 cents.

Noticeable during July was the fact that the tank wagon price not reduced in any of the 50 cities, all changes being upward. However, the month was marked by comparatively few changes, all that were made were in cities in the respective territories of the Standard Oil Co. of Indiana, the Standard Oil Co. of Nebraska, and the Continental Oil Co. Each of these marketing companies made general advances of 1 cent a gallon throughout their territories.

The average price August 1, in addition to breaking records for this year, was .597 cent higher than the average of the high prices for the entire year of 1924, although it was lower than the 1923 average by 2.123 cents. The average of the high prices of 1924 was 18.99 cents, while that of 1923 was 21.710 cents.

The month of July was marked by only one change in gasoline tax, that being in West Virginia, where the levy was increased from 2 to 3.5 cents a gallon. This change increased the average of the 50 cities from 2.18 cents July 1 to 2.21 cents on August 1. This was an increase of .03 cent in the average. The West Virginia tax increase was effective July 1.

GASOLINE PRICES EFFECTIVE AUGUST 1, 1925

Table showing gasoline tank wagon prices as of August 1, 1925, exclusive of taxes in 50 representative cities, including the amount and date of changes since July 1, 1925. High and low prices and State taxes also given.

	July 1	July Changes		Aug. 1	High and Low Prices 1924		1923		Taxes July 1 1925
Birmingham, Ala.	20.0	....	....	20.0	20.0	13.0	20.0	14.0	2.0
Phoenix, Ariz.	20.0	....	....	20.0	20.0	16.0	22.5	17.5	3.0
Little Rock, Ark.	19.0	....	....	19.0	18.0	13.0	20.5	12.5	4.0
San Francisco, Cal	15.0	....	20.0	15.0	19.0	11.0	19.0	12.0	2.0
Denver, Colo.	19.0	....	20.0	20.0	19.0	12.0	20.0	11.0	2.0
Hartford, Con.	21.0	....	....	21.0	20.0	13.0	24.5	15.5	1.0
Dover, Del.	21.0	....	....	21.0	20.0	14.0	23.0	14.0	2.0
Jacksonville, Fla.	19.0	....	....	19.0	19.0	12.0	20.0	13.0	4.0
Atlanta, Ga.	21.0	....	....	21.0	19.0	11.0	22.0	13.0	3.0
Boise, Idaho	21.5	....	....	21.0	22.5	18.5	24.0	18.0	3.0
Peoria, Ill.	18.2	J4 19.2	....	19.2	18.2	13.0	20.8	12.2	...
Chicago, Ill.	17.0	J4 18.0	....	18.0	18.0	13.0	20.0	12.0	...
Indianapolis, Ind.	18.2	J4 19.2	....	19.2	18.2	13.2	20.8	12.2	3.0
Des Moines, Iowa	18.5	J4 19.5	....	19.5	18.5	13.5	21.1	12.5	2.0
Wichita, Kan.	17.5	J4 18.8	....	18.8	17.8	12.8	20.4	11.8	2.0
Louisville, Ky.	19.0	....	....	19.0	19.0	12.0	21.0	13.0	3.0
New Orleans, La.	16.5	....	....	16.5	16.5	11.5	19.5	10.5	2.0
Augusta, Maine	22.0	....	....	22.0	19.0	13.0	24.5	15.5	1.0
Baltimore, Md.	19.0	....	....	19.0	19.0	13.0	22.5	15.0	2.0
Springfield, Mass.	21.0	....	....	21.0	20.0	13.0	24.5	14.5	...
Detroit, Mich.	18.8	J4 19.8	....	19.8	18.8	13.8	21.8	13.2	2.0
Duluth, Minn.	19.5	J4 20.5	....	20.5	19.2	14.5	21.5	12.9	2.0
Natchez, Miss.	18.5	....	....	18.5	18.5	11.5	20.0	12.5	3.0
Kansas City, Mo.	17.9	J4 18.9	....	18.9	17.9	11.9	19.5	10.9	3.0
Helena, Mont.	23.0	....	24.0	24.0	23.0	18.0	23.5	18.0	2.0
Omaha, Neb.	18.25	J5 19.25	....	19.25	18.25	11.0	20.5	12.25	2.0
Reno, Nev.	18.5	....	....	18.5	18.5	14.5	22.5	15.5	4.0
Newark, N. J.	19.0	....	....	19.0	19.5	13.5	23.5	15.5	...
Albuquerque, N. M.	23.5	....	....	23.5	23.0	18.0	25.5	17.0	3.0
New York, N. Y.	22.0	....	....	22.0	20.0	14.0	24.5	15.5	...
Charlotte, N. C.	20.0	....	....	20.0	19.0	12.0	21.5	15.0	4.0
Fargo, N. D.	19.9	20.9	....	20.9	19.6	14.9	24.3	13.6	1.0
Cleveland, Ohio	18.5	J4	....	18.5	20.0	15.0	21.0	16.0	2.0
Tulsa, Okla.	18.0	....	....	18.0	18.0	9.5	20.0	8.0	3.0
Portland, Ore.	15.9	....	....	15.0	16.0	12.0	20.0	13.0	3.0
Philadelphia, Pa.	21.0	....	....	21.0	20.0	14.0	23.0	14.0	...
Providence, R. I.	22.0	....	....	22.0	20.0	13.0	24.5	15.5	1.0
Charleston, S. C.	20.5	....	....	20.5	19.0	12.5	22.0	15.0	5.0
Huron, S. D.	19.0	J4 20.0	....	20.0	20.0	19.0	22.6	14.0	3.0
Memphis, Tenn.	16.0	....	....	16.0	18.0	12.0	20.0	12.0	3.0
Dallas, Tex.	18.0	....	....	18.0	17.0	9.0	19.0	6.0	1.0
Salt Lake City, Utah	20.5	21	21.5	21.5	21.5	16.5	23.0	15.5	3.5
Burlington, Vt.	22.0	....	....	22.0	20.0	13.0	24.5	15.5	2.0
Norfolk, Va.	20.0	....	....	20.0	19.0	14.5	21.5	15.0	3.0
Washington, D. C.	19.0	....	....	19.0	19.0	14.0	23.0	15.0	2.0
Charleston, W. Va.	19.0	....	....	19.0	19.0	14.0	23.0	15.0	3.5
Milwaukee, Wis.	18.2	J4 19.1	....	19.1	18.1	13.1	19.6	12.0	2.0
Casper, Wyo.	19.0	20	20.0	20.0	19.0	14.0	18.0	13.0	2.5
Seattle, Wash.	15.0	....	....	15.0	16.0	12.0	20.0	13.0	2.0
Minneapolis, Minn.	19.2	J4 20.2	....	20.2	18.9	12.0	....	....	2.0
Average price	19.247	....	....	19.587	18.99	13.27	21.71	13.65	2.21

MINNESOTA OIL MEETING

MINNEAPOLIS, Minn., Aug. 3.—Members of the Minnesota Petroleum Association will mix business with pleasure when they hold their regular district convention at Wade Inn, on Round Lake in northern Minnesota, August 7. The meeting has been arranged for all business to be completed on Friday afternoon so the oil men can spend the remainder of the week enjoying themselves at the northern Minnesota resort.

WYOMING OIL RATES

WASHINGTON, D. C., Aug. 2.—Present rates on petroleum oils, including gasoline, from Casper, Wyo., to points in Montana have been held by the Interstate Commerce Commission to be not unreasonable, but unduly prejudicial. Non-prejudicial relationship of rates was prescribed.

NORTH-CENTRAL TEXAS

(Continued from Page 32)

3,735 feet; No. 1 Furr, underreaming; Phillips Petroleum Co.'s No. 2 Moore, plugging back to 3,856 feet; Quakins Petroleum Co.'s No. 3 Bruce, drilling at 660 feet; Scott and others' No. 1 Whalen, 400 feet; States Oil Corp.'s No. 1 Cooper, spudding in; T. & P. Coal & Oil Co.'s No. 8 Adams, on sand at 3,630 feet; No. 56 Binney, on sand at 1,935 feet; No. 2 Hand, drilling at 3,542 feet; No. 1 Jackson, 2,800 feet; No. 8 Veale, 2,760 feet; No. 9 Veale, 500 feet; The Texas Co.'s No. 37-A Parks, fishing at 3,222 feet; No. 3 Vick, drilling at 490 feet; Tidal Oil Co.'s No. 1 Mayhall, 3,150 feet; Walter Caldwell Co.'s No. 3 Jones, on sand at 3,200 feet; Waylord Oil Syndicate's No. 1 Dooley, drilling at 3,560 feet; Williams and others' No. 11 Rosenquest, 1,110 feet.

Eastland County Drilling

Brewer and others' No. 1 Stephens, drilling at 1,540 feet; Davison and others' No. 1 Jones, 750 feet; Holmark Oil Co.'s No. 1 Gilbert, underreaming; No. 6 Thompson, drilling at 1,975 feet; Hoffman and others' No. 1 Higgins, 425 feet; Lightfoot and others' No. 2 Allen, fishing at 2,950 feet; Panhandle Refining Co.'s No. 1 Casey, drilling at 1,465 feet; Pettit and others' No. 1 Sue, underreaming; Robert Oil Corp.'s No. 5 McMinn, drilling at 400 feet; States Oil Corp.'s No. 4 Henderson, 985 feet; Dorothy Oil Co.'s No. 1 Kincaid, 1,530 feet; Hoffer Oil Corp.'s No. 1 Hitson, 602 feet; Holliday and others' No. 1 Raney, setting casing at 940 feet; Landreth Producing Co.'s No. 1 Wilkerson, drilling at 3,380 feet; Pitzer and others' No. 1 Rust, 1,900 feet; Reeves and others' No. 1 Leveridge, 250 feet; Root and others' No. 1 Noble, on sand at 3,625 feet; States Oil Corp.'s No. 5 Hise, fishing at 680 feet; The Texas Co.'s No. 1 Chastain, drilling at 720 feet.

CENTRAL NEW MEXICO IS TO BE TESTED

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peaks of which are exposed as schist and quartzite, in north quarter corner of Section 6-3n-13e, with a strike north 72 degrees east, and with a dip 75 degrees northwest. Similar exposures of the same materials, with the same dip, with strike north 76 degrees east, occur in Section 2-3n-13e. This ancestral range runs below the surface from west to east, at a distance of 4 miles north and 6 miles west of this little freak Luna well. According to the geologists the latter sedimentaries which compose the oil producing formations of the Duran structure, were laid down unconformably on the eroded slopes of that ancient granitic range, which seems to come from Rattle Snake Mountain.

An andesite dike is shown exposed in Section 8-2n-14e, which strikes north 28 degrees east, and apparently runs across the country for a distance of 8 miles. This dike is 3 to 4 miles to the west of the west side of the Duran dome.

There is a red gypsum exposure belonging to the top of the Permian, in NE cor. Section 32-4n-13e, which the big company geologists declare is structure.

Several Tests Promised

Several deep tests are promised immediately by operators from the Mid-Continent, Wyoming and California.

The first to organize a drilling block in the Duran country, were the Livingston interests of Tulsa, long known as operators in Oklahoma, Arkansas and Texas, who already have a string of tools on the ground at Carlsbad in extreme southeastern New Mexico.

The Livingstons and their associates, including California capitalists now operating on the Pacific Coast, have made their first location in a block of 25,000 acres embracing practically a solid tract taking in substantially all of Townships 3n-15e and 2n-15e, and the west side of Township 3n-14e and 2n-14e, and also the east side of Township 3n-16e and 2n-16e.

The first test drilled on this structure, which was put down to a depth of 1,254 feet, where the bit was twisted off in the hole, necessitating the selection of a new location after a long and futile fishing job, is reported to have encountered the following six showings: 646 feet, oil and gas sands; 803 feet, good showing of oil and gas in dark red sandstone; 940 feet, oil and gas in dark sandstone; 1,015 feet, heavily saturated oil sand; 1,192 feet, oil showing in dark sandstone. The bit wound up in blue limestone at 1,254 feet, where loss of tools forced abandonment.

The Eddleman-Woods test will spud in within a week in Guadalupe County on the Salado Creek structure, northeast of Duran, in the SW NW Section 6-4n-19e. A new steel rig, shipped from Pittsburgh, Pa., and a full string of tools and 2,000 feet of pipe have been landed on the ground. This outfit is headed by M. F. Woods of Fort Sumner, N. Mex. M. E. Eddleman, of Cole, Texas, is in charge of drilling operations. T. P. McDonald, geologist of Casper, Wyo., made the location.

The Atlantic Production Co. is expected to start drilling July 28 in the northwestern corner of DeBaca County, almost due east of Duran.

Two other deep tests are to be made in Torrance County on blocks of 50,000 acres each, by the Munoz interests, owners of the New Mexico Central Railroad system, and Oklahoma contractors, who are drilling for a part of the acreage. One of the blocks is located in the vicinity of Willard and extends to the eastern slope of the Manzano uplift. The other block is to be drilled at a site selected on the Chilili grant near Chilili settlement, about 10 miles southwest of Moriarity, the closest railroad point. Both of these tests are located northwest of Duran, which seems to be rapidly developing into the principal center of the new Central New Mexico zone of operators.

Drilling operations have been started on a block of several hundred thousand acres just east of Duran, on the Guadalupe-DeBaca County line, by a California syndicate headed by Judge John I. Hinkle, vice president of the First National Bank of Huntington Beach, Cal., and a brother of James F. Hinkle, former governor of New Mexico.

KENTUCKY'S THREE DEVELOPMENT STAGES

(Continued from Page 28)

utes, he handed us a statement of the amount of oil per acre the sand contained and also volunteered the information that within a certain time we would have drained the sand completely and we would be pulling the wells. We disliked to hurt his feelings but candor compelled us to tell him we had already pumped more than twice the amount he claimed the sand could hold and were daily getting about 150 bbls. from the property. If we should see him today we would have to tell him that our date of abandonment seemed several years ahead.

Profit in Shallow Pools

Several pools furnish concrete illustrations of the profitableness of shallow drilling in Allen County, among them being the McReynolds Pool, a portion of which was developed by the writer. It has not only paid out but is now pumping the second 100 per cent dividend; the Angie McReynolds, in the same section, far excelled the other farms in that pool, but its production records are not available; however, it is safe to say it paid several times its cost and is making a very satisfactory yield today.

By far the most productive pool ever discovered in western Kentucky is the Mitchell Pool, on the Franklin Pike, about 3 miles southwest of Scottsville. It is on the most ideal dome so far discovered in the State as will be observed from a study of the map and contours accompanying this article. This pool was mapped by the writer while being developed and production records carefully compiled from daily runs at the time. Out of the 27 acres comprising the Mitchell farm, only about 15 acres actually produced oil in large quantities, that portion is said to have yielded better than 9,000 bbls. per acre; the lease is pumping 75 bbls. and two new wells recently came in doing about 20 bbls. each. The other leases in this pool were equally productive in proportion as their area lay near the top of the dome. All the wells were shallow, ranging from 150 feet to about 250 feet, and one to three joints of 6¼-inch casing composed the casing expense. A number of the wells made as high as 400 bbls. to 600 bbls. a day and continued making a big yield for several months. The sand ranged from 15 feet to 30 feet in thickness.

The great dome northwest of Gainesville, in the northern part of the county, is the largest single producing area and probably 800 wells have been drilled on it, nearly all being commercially productive. The sand is thick and free, as a rule, from water trouble, and it has proven an ideal field for operators. A considerable area is owned by the Snowden Brothers, who operate in Kentucky under the name of the White Plains Oil & Gas Co. Their leases are skillfully handled and successfully operated. Many of their properties have a number of good looking undrilled locations that will afford them, in all probability, satisfactory production for many years to come. They are the largest operators in western Kentucky and among the first to develop their holdings.

Another very important proof of the faith in the staying qualities of the shallow oil fields of Kentucky is the fact that the Indian Refining Co., of Lawrenceville, has recently expended something over $1,000,000 in laying a new pipe line from Lawrenceville to Allen and Warren Counties, with boosting stations and a radio outfit suitable to handle a large volume of business economically. The Indian was among the first purchasers of Allen County crude; it has been in constant touch with all the wells in the county; its employes have seen hundreds of them drilled in and carefully followed their performances over a period of years. If any further proof were needed to refute the statements that western Kentucky wells were a mere flash in the pan, or that they did not hold up, or that they were unprofitable and that they were usually too small to operate profitably, is not the fact of the Indian's investment in a pipe line sufficient answer?

What Contouring Disclosed

During the past three years, the writer has been engaged in making a structural map of the oil pools of Allen and Warren Counties and has accumulated the logs of over 2,500 wells in Allen County and run casinghead elevations to over 3,000 wells and the map has now been reduced to scale and partially contoured. Production records on a large number of wells have also been acquired and pipe line runs tabulated so as to show with a fair degree of accuracy the production curves, and, where possible, the average sand content per acre. In a number of instances the results have proven very surprising. The contouring also disclosed a number of good looking folds or domes, where future drilling may prove very profitable; some increases in crude prices will be necessary to stimulate drilling, of course, but it is only a question of time until further search for new oil pools will be renewed in Allen County and also in certain parts of Warren County.

Overcoming an Obstacle

Possibly the greatest obstacle Warren and Allen Counties have had to overcome was the very unfortunate manner in which most of their leases were originally acquired and development work undertaken. These two counties came into prominence during the "boom" days of wartimes, when $12 silk shirts were worn by the ditch diggers and everyone was anxious to make some easy money in the new oil fields, where oil brought $5 a barrel. A section within a night's ride of Cincinnati and within three hours' ride of Louisville and Nashville and where 500-bbl. wells were actually coming in at 300 feet and costing less than $1,000 and selling for $50,000 the following day could hardly fail to tempt even the conservative investor to "take a flier." Leases were bought at high prices, $100 an acre to $500 an acre; $4 a foot for drilling and labor and material equally high, and when wells did not make 500 bbls. but came in at 15 to 25 bbls. the investors shortly discovered they could not pay for the lease, or pay the high priced manager his salary and pay for the luxuriously furnished offices and a pumper at $250 a month out of the proceeds from a 15-bbl. well. When oil dropped to 95 cents a barrel, it was the same old story over and over again; nearly all such promotion schemes "busted up" and the promotors fled to new fields and eventually the leases with the wells reverted to the farmers or were sold by the sheriff to pay pumpers and drillers. The writer ventures the assertion that dozens of 10- and 15-bbl. wells were allowed to stand idle and gradually deteriorate, which, if they had been properly handled would have paid out and earned for their owners ample returns on the cost of operation.

It is this class of "oil men" who are very largely responsible for the circulation of misleading statements regarding western Kentucky's oil fields. They attribute their misfortune and losses to the unprofitableness of the oil wells rather than to the unbusinesslike manner in which they invested their money in syndicates or promotion schemes nearly all of which were headed by green men and whose sole purpose was to "get theirs" and "beat it." Scattered throughout many States are holders of syndicate units or owners of stock in promotion schemes whose promotors promised to make them at least 100 to 1 by drilling in Kentucky fields. These unfortunate investors were never really in the oil business and lost their money the day they invested it because of the excessive price of the leases, overhead expenses and a dozen other burdens no legitimate company could carry and earn any money, and especially on a rapidly declining market.

An Advantage to Oil Men

But it is an ill wind that blows no one any good and while the above condition worked a hardship on thousands of innocent persons it really has proven very advantageous to the wideawake operator who has now an opportunity to buy good looking properties at away below cost of drilling and equipment. Many leases have been bought during the past year or two on a basis that shows an income of from 25 to 75 per cent net and usually with large areas yet to drill. Even if many of the wells are small, by combining them in groups, one good man at $65 to $75 a month will pump 25 to 50 wells and do it nicely. If they average only 1 bbl. a day each this provides quite an income and it is assured for years to come.

In discussing this situation recently with the chief geologist of one of the Standard group, we mentioned the fact that his company and others had apparently overlooked this opportunity to pick up a number of very attractive properties on a basis that would afford a big return on their cost; he surprised us by saying his own company was not contemplating doing this very thing and that he expected to see a changed attitude in the near future and that it would not be very long, in his opinion, before his company would be back in Allen County picking up bargains wherever obtainable and preparing to extend its holdings into all parts of the county.

After observing the progress in the field from the day when it had but a few wells to its present status, we are more firmly convinced than ever that eventually western Kentucky will be universally regarded as the greatest shallow oil field in the world—a place where the poor man and small operator can get a bigger run for his money and be assured of a more permanent investment if he attends to his wells, than anywhere else on earth.

Oil Securities Heavy During Past Week

No Great Amount of Activity Shown in Petroleum Issues at Any Time Despite Reports of Increased Dividends to Come

By N. O. Fanning
Room 543, No. 30 Church St., New York

NEW YORK, Aug 3.—Oil securities were heavy during the past week. Humble Oil & Refining sold off sharply despite a report that the dividend would be increased. The selling of oil did not develop any great amount of activity at any time.

The long heralded "move" in oil securities appeared to have come in the form of a healthy reaction, quite the opposite of what many in the financial district had expected. A continuance of a downward trend would doubtless serve to discourage traders in oil stocks from buying for some time.

Financial Reports

The financial reports of oil companies for the first six months of 1925 were in almost each case highly favorable. Some hold the theory that these earnings were discounted early in the year. Does Wall Street expect the last half of 1925 to be less favorable? If so, on what does it base this theory?

Marland Oil

E. W. Marland, president of the Marland Oil Co., has announced that the company has received official notification from J. P. Morgan & Co. that they are exercising the 150,000 shares balance of their option on the common stock. The price of this option is $40 per share.

This will mark the completion of the options obtained by J. P. Morgan & Co., under which a total of 635,000 shares of Marland Oil treasury stock has been purchased from the company for an aggregate of $22,400,000 cash. The first option was for 300,000 shares at $30 per share, or $9,000,000 in cash, in January, 1924. This marked the entry of J. P. Morgan & Co. as bankers for Marland Oil. At the same time an option was given to the bankers for an additional 335,000 shares of treasury stock, running to February 10, this year, at $39 per share, with a consideration of $1 per share for the option, making total cost of the second option $40 per share.

On February 10 of this year 100,000 shares of the second option was exercised and the balance extended six months to August 10. Late in June the bankers exercised option on 85,000 shares. This left 150,000 shares of the 335,000 shares and these will now be exercised.

It is reported Marland Oil Co. may retire on November 1 at 101 and interest its $20,000,000 two-year 5 per cent notes, due November 1, 1926, which were sold privately at par by a Morgan banking group eight months ago.

Mid-Continent Petroleum

Mid-Continent Petroleum Corp. reports for six months ended June 30, 1925, tion and depletion, but after interest, net income of $7,346,734 before depreciation and depletion, but after interest, abandoned wells, etc. Consolidated income for quarter ended June 30, 1925, and first six months of 1925, follows:

	June quar.	6 mos. end. June 30, '25
Operating profit	$4,083,509	$8,152,383
Dry holes and abandoned wells	203,033	405,280
Interest	228,632	400,369
*Net income	$3,651,844	$7,346,734
Preferred dividends		253,114
*Surplus		$7,111,620

*Before depreciation and depletion.

Consolidated balance sheet of Mid-Continent Petroleum Corp. and subsidiaries, as of June 30, 1925, follows:

Assets: Capital assets, less depreciation and depletion, $63,098,326; investment, $1,787,767; cash, $4,125,196; United States Treasury certificates, $2,049,687; gold bonds in treasury, $240,311; accounts and notes receivable, 3,213,519; refined and crude oils, $7,696,434; materials and supplies, $2,175,302; deferred items, $1,738,451; total, $86,124,993.

Liabilities: Preferred stock, $6,577,475; common stock, (represented by 1,357,415 no par shares), $40,879,230; gold bonds, $12,201,000; leasehold purchase obligations, $1,909,423; accounts payable, $1,720,632; accrued interest and taxes, $714,440; deferred credit items, $62,616; surplus arising from operations, $14,541,868; total, $86,124,993.

Mid-Continent Petroleum Corp. declared regular quarterly dividend of 1¾ per cent on the preferred, payable September 1 to stock of record August 15.

Sun Oil Co.

The Sun Oil Co.'s first statement of earnings since the sale 158,000 shares of its capital stock shows that net earnings for the six months ended June 30, after depreciation, depletion and Federal taxes, were $2,529,001, equal to $2.39 a share on the 1,057,159 shares of no par common stock. This was at the net figure compared with $2,106,625 for all of 1924.

Average annual net earnings for the 10 years ended December 31, 1924, were $3,327,761, or $3.14 a share earned yearly on the basis of the company's present capitalization.

Barnsdall Corp.

Barnsdall Corp. for six months ended June 30, 1925, reports net income of $1,226,095 after taxes, interest, ciation, depletion and reserve charges, equivalent to $1.38 a share (par $25) earned on $22,141,750 combined Class A and Class B capital stocks. This compares with $857,380 or $1.21 a share on $17,713,400 outstanding combined stocks in first half of 1924.

Net income for the June quarter of this year was $675,945, equal to 76 cents a share earned on $22,141,750 combined Class A and Class B stock, comparing with $550,150, of 77 cents a share on combined $17,713,400 stock in preceding quarter and $386,730, or 54 cents a share in second quarter of 1924.

Skelly Oil Co.

The Skelly Oil Co. and subsidiaries report for the quarter ended June 30, 1925, net income of $1,578,209, after interest, depletion and depreciation, but bofere Federal taxes, equivalent to $1.91 a share (par $25) earned on outstanding $20,579,090 capital stock. This compares with $750,134, or 91 cents a share in the preceding quarter, and $596,032, or 72 cents a share, in second quarter of 1924.

Net income for the first six months of 1925 totaled $2,328,344, equal to $2.82 a share, compared with $1,499,945, or $1.82 a share, in first half of 1924.

The Consolidated income account for quarter ended June 30, 1925, compares as follows:

	1925	1924
Gross	$5,998,250	$5,582,763
Expenses, etc.	2,837,271	3,426,327
Net earnings	$3,160,979	$2,154,436
Interest and discount	251,572	244,056
Depreciation and depletion	1,331,198	1,314,348
*Net income	$1,578,209	$ 596,032

*Before Federal taxes.

Consolidated income account for six months ended June 30, 1925, compares as follows:

	1925	1924
Gross	$9,946,621	$9,668,220
Expenses, etc.	4,728,626	5,087,758
Net earnings	$5,217,995	$4,580,462
Interest and discount	507,837	465,946
Depreciation and depletion	2,381,814	2,614,571
*Net income	$2,328,344	$1,499,945

*Before Federal taxes.

Standard (Calif.) Dividend

At a regular meeting of the Board of Directors of Standard Oil Co. (California), regular quarterly dividend No. 67, of 50 cents a share, was declared, payable September 15, 1925, to all stockholders of record on August 17.

ASK FREIGHT ADJUSTMENT

CHICAGO, Aug. 3.—A meeting of the traffic representatives of refiners located in Arkansas, Louisiana and Texas, with some of the representatives of the Standard, Roxana and Sinclair refiners in Illinois, Indiana and Ohio, was held in the rooms of the Central Freight Association. The meeting was to ask for relief from a condition brought about by the lowering of freight rates from Group 3 to Indiana points which went into effect on May 25. This, the refiners claimed, placed them at a disadvantage compared with the Group 3 shippers. Chairman Eugene Morse presided at the meet, at which some 30 to 35 representatives were present.

After hearing the statements of the refiners' representatives, the chairman stated that while he could promise them nothing, he would take up the matter with the carriers and with the Interstate Commerce Commission, and give them a reply in a very few days. Later, he said he would be obliged to place the request of the refiners before the executive committee of the Central Freight Association, and expects to do so this week.

GEOLOGISTS SELECT DALLAS

The American Association of Petroleum Geologists will hold its next annual meeting in Dallas, Tex., in March, 1926, according to an announcement by President E. DeGolyer.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	§Dividends Par	Rate	Clos. Aug. 3	Quot. July 27	1925 High	1925 Low	1924 High	1924 Low	1923 High	1923 Low
American Republics	..	..	*64⅛	*62⅝	76	48	48	25	..	..
Associated Oil	25	8	38½	40	40¼	32	34⅝	27⅝	29¼	29½
Atlantic Ref. com.	100	..	*111½	116½	117½	95½	140½	78½	160	98¾
Barnsdall "A"	25	..	21	23	30	21	22¼	14	37	9¾
Californiaa Pet. com.	25	7	27⅝	28½	32⅞	23⅞	29	19⅞	28½	17½
General American Tank	..	†3	45¼	*46½	58½	45	53	35½	71⅝	40
General Petroleum	25	8	51¼	55¼	59	42	45	38⅝	..	..
Houston Oil	100	..	68⅝	72¼	85	59	82½	61	78	40⅝
Independent Oil & Gas	..	†1	31	33¾	41⅜	13½	16¼	5⅝	11¼	3⅝
Indian Refining	10	..	* 7½	8¼	10⅜	5½	7	3⅜	8½	4
Louisiana Oil	50	..	16	17⅛	23⅜	14⅝	..	..	..	..
Maracaibo	..	..	24⅜	*25⅞	35½	25½	37½	25⅝	28¼	16
Marland	..	†3	45	46⅞	46⅞	32⅝	42	29	59⅝	18½
Mexican Seaboard	..	..	13	14	22⅛	11¼	25⅜	14¼	19⅜	5⅜
Mid-Continent Pet.	..	..	30½	32¼	36	26½	40¼	22⅝	62¼	23⅝
National Supply	50	6	*58½	59½	71	61¾	72½	54	68	54
Pacific Oil	50	†3	55⅛	57	65¼	52¼	58¼	45	52⅛	31½
Pan-American com.	20	12	70⅛	71½	83⅜	64	65	44¼	93½	53
Phillips Petroleum	..	†2	41⅜	44⅜	47⅞	36¼	42¼	28½	69⅝	19⅝
Producers & Refiners	50	..	16⅝	18¼	32⅝	18	43½	29⅝	58¼	17½
Pure Oil com.	..	6	28	28⅜	33⅜	25½	30¼	20	32	16¼
Royal Dutch N. Y. sh.	13.40	4.42½	51⅞	52⅝	57⅝	48¼	59½	40⅝	55½	40½
Shell Transport	10	3.30	*41½	*42	45⅝	39⅝	42	33	41⅛	29½
Shell Union com.	..	†1.40	23	24¼	28⅜	22½	22½	15⅜	19¼	12⅝
Simms Petroleum	10	..	22½	23⅜	26⅜	19½	24	10⅜	16⅜	6½
Sinclair Consolidated com.	..	..	20⅝	22⅝	24⅞	17	27½	15	39⅜	16
Skelly Oil	25	..	24⅝	26½	30½	21⅜	29	17⅛	35	12⅛
Standard of California	25	8	56	57⅝	67¼	56⅝	68½	55½	64½	47½
Standard of N. J. com.	25	4	42	43⅝	47½	38⅝	42½	33	44⅛	30⅞
Superior Oil	6	..	* 3⅝	3⅞	6⅛	3⅝	8½	2⅝	6⅝	2
The Texas Co.	25	12	50⅝	52	54⅝	42⅜	45⅝	37¾	52⅞	34⅝
Texas Pacific Coal & Oil	10	..	13⅛	14⅜	23⅝	11½	15¼	11¼	24⅝	5½
Tide Water Oil (new)	..	4	33	34	‡152	122	151	116¼	144	94
Transcontinental	..	..	4⅝	4½	5⅞	3⅜	6¼	3⅜	14¼	1¼
Union Oil of California	25	7.2	36⅝	37¼	43⅝	36¼	39	35½	..	..
Union Tank com.	100	5	125½	*126	134	118½	132⅞	94	114	106
White Eagle Oil & Ref.	..	2¼	27	28	31⅜	25⅝	29⅝	23¼	30⅜	29½
Anglo-American Oil	£1	25	23	22¼	26⅜	18	18⅜	14⅜	19⅜	13½
Borne Scrymser	100	12	*235	239	240	212	264	150	163	110
Buckeye Pipe Line	50	14	60	60	72	58½	85½	51	94	57½
Chesbrough Mfg. Co.	25	14	63	65	70	48¼	52½	29¼	340	205
Crescent Pipe Line	25	..	15½	15¼	15⅝	10	20	11¼	25	15
Cumberland Pipe Line	100	12	*148	*153	151	128	148	108	117	80
Eureka Pipe Line	100	8	*72½	*72	96	76	105	74	117¼	87
Galena Signal com.	100	5	50½	*54	68½	55	69¾	52¼	78	55
Humble Oil & Refining	25	4.8	61½	67½	72½	42½	43¾	36	41	28¼
Illinois Pipe Line	100	12	136	136	154½	127	161	123	171	115
Imperial Oil (Ltd.)	..	†2	31	32¼	34½	27⅝	119	99	123	92
Indiana Pipe Line	50	8	68½	67	84	69¾	110	66	103	81
International Pet. Co.	10	x50	24⅝	25½	28¾	22¼	24¾	16⅞	24¾	13¼
Magnolia Pet. Co.	100	4.5	145	147½	159	131½	162	124	166	123
National Transit	12.50	16	21⅛	21½	26½	22	25⅝	20⅝	29	19⅛
New York Transit	100	3	55	*55	79	55	97	54½	138	70
Northern Pipe Line	100	6	83	*81	88	80	107½	72	111	96
Ohio Oil Co.	25	8	63¾	62½	76¼	60	* 79¼	53	85¾	48¾
Penn.-Mex. Fuel	25	..	*26⅜	*26	44	35⅜	35⅝	27	46	10½
Prairie Oil & Gas	25	†2	55⅝	58	65½	50¼	269	193	273	152
Prairie Pipe Line	100	8	126	126¼	127½	106	111	100	117	93
Solar Refining Co.	100	15	*222	224	259	200	240	170	212	161
South Penn Oil	100	..	168¾	*169¾	197	139	176	117	196	100
South West Pa. Line	100	6	*66	*65	84	5	89	68	89	66
Southern Pipe Line	100	4	81	81	103	81	100	80½	116	87
Standard of Indianaa	25	10	63⅝	65¾	70	59½	69⅝	54¼	69⅝	48½
Standard of Kansas	25	..	34	35½	46	31	50½	32½	56¼	36½
Standard of Kentucky	25	16	124	125½	124¾	114¾	121⅞	101	109½	76
Standard of Nebraska	100	20	*246	*243	270	244	262	198	280	186
Standard of New York	5.6	42		43½	48⅝	41¼	48	37⅜	49⅜	35½
Standard of Ohio com.	100	10	354	358	369	338	337½	277	320	270
Swan & Finch com.	25	..	16	16¼	27	16	28	20	..	..
Vacuum Oil	25	†3.75	88½	89¾	96¼	80¼	83½	56½	55½	40
Washington Oil	10	..	*33	*33	30½	30	29	25	28	20¼
Miscellaneous Stocks										
Continental	10	10	23⅜	25⅝	31½	21⅞	..	..	..	..
Gulf Oil Corp. of Pa.	25	6	76½	77½	78¼	63½	67⅜	56	68¼	45⅝

*Bid, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share. ‡Old stocks.

The Oil and Gas Journal's weekly average price of 20 representataive petroleum stocks listed on the New York Stock Exchange was as follows:

Aug. 3	54.51	June 29	56.36	May 25	56.04
July 27	56.21	June 22	57.29	May 18	55.32
July 20	57.13	June 15	58.51	May 4	54.33
July 13	55.98	June 8	56.37	May 11	54.36
July 6	55.96	June 1	55.65	Apr. 27	52.70

Test for Decolorizing Efficiencies

Refinery Engineers Devise Accurate and Quick Method of Determining the Relative Values of Burned Clays

By J. B. Hill, L. W. Nichols, and H. C. Cowles, Jr.*
The Atlantic Refining Co., Philadelphia, Pa.

In the revivification by burning of spent fuller's earth or clay, resulting from the filtration of heavy petroleum oils, proper control of the clay kilns has been difficult because no easy means of comparing the relative activities of the burned clays has been at hand. The activity of the clay is commonly tested by percolation through a sample of it an oil similar to that which it is desired to clay-treat in plant practice, and obtaining a rough idea of the yield of proper color oil. The tediousness and inaccuracy of this method, coupled with the fact that the variation of the oil used for this test makes it only very roughly reproducible, has led to a search for a quick and reasonably accurate test on burned clays which could be applied as a check on the clay kilns.

Preliminary Experiments

Several methods were given preliminary trials, among them, the decolorizing effect of the clay on a standard solution of a pure dye in a highly purified and definite oil of about the kerosene range, and decolorizing action of the clay on a vegetable oil, such as soy bean oil, which could be obtained as a fairly standard article. An aqueous solution of methylene blue has been used with some success to test clays in the ceramic industry. This solution when applied to the present problem showed such promise and seemed so simple that it was finally adopted and the method described developed on the basis of it.

The general method was to shake a definite weight of the clay with a definite volume of a standard solution of the dye under certain standard conditions, and to compare the resultant partially decolorized solution with standards made up from the original methylene blue solution by dilution with water in various proportions and nuembered according to the percentage of the original solution in the dilution. A reported number, therefore, represents the percentage of dye in the original solution not absorbed by the clay. A concentration of about 0.25 gram dye per liter was found convenient for the original solution. A considerable number of variables enter into the method and these were separately investigated and standardized.

Variation in Samples

The variations between lots of methylene blue from different sources and the reproducibility of the standard solution were naturally of prime importance. Samples of methylene blue were obtained from two reliable distributors and compared. One product was apparently about 15 per cent stronger than the other—i.e., 15 per cent more of one dye was necessary to give a solution of the same color intensity than of the other. In order to avoid this difficulty, a solution of inorganic salt was made up as a standard, and the dye solution was made up roughly by weight and adjusted to match this standard. Solutions of these two blues gave identical results on the clay test.

Solution Acid—It developed very early in the course of the work that it would not be possible to use a neutral solution of the methylene blue on account of an apparent alkalinity of the clay. In order to make sure that the solution remained acid, the original methylene blue solutions were made up in 0.1 N surfuric acid. In acid much more dilute than this, especially with fresh clays, low readings are obtained.

Removal of Suspended Clay—It was also necessary, before reading to remove the suspended clay from the solution by centrifuging rather than by filtration, on account of adsorption of the color by the filtering medium.

Weight of Clay

The weight of the clay to be used with 100 cubic centimeters of the standard solutions was investigated with the idea of setting one weight which would give readable results for clays over the entire range from a light-burned, unused clay to a clay used and burned so often that it is ready for the dump. Table 1 shows the differences obtained by using various weights of the clays. Inasmuch as comparison with the standards are most easily made within the range of Numbers 1 to 30, the 4-gram sample was considered the most satisfactory and adopted as standard.

Table 1—Effect of Various Weights of Clay on the Methylene Blue Number

	Methylene Blue Number			
Clay*	2 grams	3.5 grams	4 grams	5 grams
A	9	1.3	0.9	0.5
B	24	8.0	4.5	2.0
C	28	9.0	6.0	3.0
D	30	10.0	6.5	3.0
E	34	12.0	7.5	4.0
F	44	20.0	11.0	7.0
G	50	22.0	15.0	11.0
H	52	26.0	22.0	16.0

*Sample A is a burned, un-used clay. Samples B to H have been used and reburned one or more times.

Time of Shaking—The effect of normal variations in the shaking of the clay with the solution was found to be unimportant. The time of shaking is, however, a serious factor and must be kept constant. Table 2 shows the results obtained on two different samples of clay, shaking for various lengths of time. Although the 10-minute shaking does not by any means produce the maximum adsorption of dye, a longer time was considered cumbersome, and since the results at 10 minutes could be duplicated this time was adopted.

Table 2—Effect of Time of Shaking on the Methylene Blue Number

Time of shaking	Methylene Blue Number	
Minutes	Clay C	Clay H
5	22	40
10	9	26
20	3.2	12

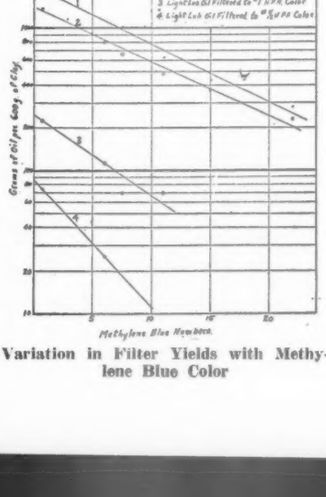
Temperature — The temperature at which the test is carried out is also shown to be important, as indicated in Table 3. A temperature of 32.2 degrees Centigrade (90 degrees Fahrenheit) was set in order to approximate maximum normal laboratory temperature. Judging from the rate of change of the result with temperature, this should be held to 90 degrees plus or minus 3 degrees Fahrenheit.

Table 3 — Effect of Temperature on the Methylene Blue Number

	Temperature		Methylene
Clay	°C	°F	blue number
C	15.6	60	15
	32.6	90	9
	57.2	135	4

Final Method

A solution of a reagent grade of methylene blue is made up in a strength of approximately 0.25 gram per liter in approximately 0.1 N sulfuric acid. The solution is adjusted so that a dilution with nine parts of water compared in a 113 cubic centimeter (4-oz.) oil sample matches a standard cobalt solution in a similar container in itensity of color. The standard cobalt solution is a solution of cobaltous chloride in 95 per cent alcohol containing 2.5 volume per cent of 32 per cent hydrochloric acid and 0.4700 gram cobalt per 100 cubic centimeters and 15.6 degrees Centigrade (60 degrees Fahrenheit.


1. Heavy Lub. Oil Filtered, to 0 G.N.P.A. Color.
2. Light Lub. Oil Filtered, to 0 2 N.P.A. Color.
3. Light Lub. Oil Filtered, to 0 1 N.P.A. Color.
4. Light Lub. Oil Filtered, to 0 ½ N.P.A. Color.
Grams of Oil per 600g of Clay.
Methylene Blue Numbers.

Variation in Filter Yields with Methylene Blue Color

Several standards are made up in 4-ounce (113 cubic centimeter) oil sample bottles from the standard methylene blue solutions by dilution with various proportions of water and marked with a number corresponding to the per cent of the original solutions in the diluted standard. A convenient set of standards is 1, 2, 3, 5, 7, 10, 13, 16, 19, 22, 25, and 30. Standards below 1, of course, can also be prepared. These standards, particularly the lighter ones, are not permanent and should therefore be made up fresh every few days. All bottles used for the standards, as well as for the test, should be selected with uniform sides and of about 32 to 34 millimeters inside diameter.

Four grams of the burned clay to be tested are added to 100 cubic centimeters of the methylene blue solution at 32.2 degrees Centigrade (90 degrees Fahrenheit) in an 8-ounce (227-cubic centimeter) bottle, and the bottle is immediately stoppered and shaken for exactly 10 minutes at an approximate rate of 100 to 200 shakes per minute. The dye solution is quickly decanted into a suitable centrifuge tube and centrifuged for about 10 minutes. The clear dye solution is poured into a 4-ounce (113-cubic centimeter) oil sample bottle and matched against the standards, the test being reported as the number on the standard which matches the test.

Results

Tests were conducted by this method on a series of clays and compared with percolation yields from different lubricating oil stocks to several different colors. The percolation tests were run on 20-ounce (567-cubic centimeter) hand filters containing 600 grams of clay, on the same samples of oil, running under as nearly the same conditions of temperature, rate of percolation, etc., as could be obtained. The results are shown in Table 4 and also graphically in the figure. It will be noted that the points lie along the same general direction, although they do not conform to any expected form of curve. The curves have been drawn as straight lines only as an approximation to the recorded data. The points on the unused clay are somewhat out of line and if these are taken out a much smoother curve is possible.

Table 4—Comparison of Filter Yields with Methylene Blue Number

		Filter Yields (Grams per 600 Grams)			
		Libht lubricating oil filtered to:			Heavy lubricating oil filtered to
Clay	Methylene blue number	½ N. P. A.	1 N. P. A.	2 N. P. A.	6 N. P. A.
A	0.8	75	225	1350	2100
C	6.0	25	112	800	1380
E	7.5	0	69	660	1000
F	11	0	69	480	620
G	15	0	0	365	435
I	22	0	0	230	280

Effect of Moisture

Experience on this method of testing clays indicates that it is limited to burned clays. Clays revivified by other means do not line up at all with the percolation data. The effect of water in the clay on the test is also interesting. Although it is general experience that the presence of moisture in clay very materially lowers its decolorizing activity on percolation at temperatures below the boiling point of water, the methylene blue test is not affected. This is, of course, as would be expected, but the results—as exemplified in the data in Table 5—are rather striking. Apparently the methylene blue test indicates the value which the clay would have if it were dry. Inasmuch as samples of clay are much more likely to have an opportunity to absorb moisture than the large bulk of clay from the kilns, this point offers a decided advantage for the methylene blue test, since precautions to insure the avoidance of moisture absorption are eliminated.

Table 5—Effect of Moisture on Methylene Blue Number and Filter Yield

			Filter Yields, Grams per 600 Grams	
	Per cent	Methylene	Light lubricating oil filtered to	
Clay	Moisture	blue number	1 N. P. A.	2 N. N. P. A.
A	0.0	...	200	1130
	0.18	0.9	160	880
	0.90	0.8	180	850
	3.70	0.9	50	475
B	0.0	7.0	100	820
	0.12	8.0	75	720
	0.35	8.0	0	510
	2.40	9.0	0	310

*Presented before the Division of Petroleum Chemistry at the meeting of the American Chemical Society, Baltimore Md., and reported in Industrial and Engineering Chemistry.

REFINERIES IN POLAND TWICE CRUDE CAPACITY

Poland has 38 refineries and more than a dozen primitively constructed plants with a total capacity of 9,000,000 bbls. of crude oil annually, according to a report of the Union of Mineral Oil Producers & Refiners of that country. The capacity, however, is nearly twice the present crude production.

The Polish refineries are producing all oil products except lubricating oils with cold test below 10 degrees, the latter being manufactred from special crude which is scarce in that country. During 1924, according to the report, the refineries produced 770,000 bbls. of gasoline, 1,530,000 bbls. of kerosene, 815,000 bbls. of gas oil, 830,000 bbls. of lubricating oils, 76,000,000 pounds of paraffin, 7,700 tons of asphalt, 810,000 pounds of vasoline, and 8,900 tons of coke.

The largest Polish refinery is the State plant, erected by the Austrian Government as a skimming plant in 1919, but in 1924 extended and enlarged by the Polish Government into a complete refinery.

REFINING AND MARKETING

CHICAGO JOBBERS TALK OF BUILDING REFINERY

CHICAGO, Aug. 1.—Independent jobbing interests owning their own refinery sources of supply loomed as a possibility following a meeting held here this week which was attended by approximately 30 of the largest jobbing concerns of the Middle West. At the meeting, which was sponsored by the National Petroleum Marketers Association, sufficient funds were subscribed to finance an investigation as to the feasibility of the plan.

The proposition as it now stands is to build a refinery with both skimming and cracking facilities to be located presumably in the Chicago territory adjacent to one of the major pipe lines connected to the oil pools of the Southwest. It is understood that data was presented at the meeting showing refinery costs, the latter tending to show that jobbers could manufacture their own gasoline much cheaper than they can buy it from independent refineries.

In local trade circles the movement is considered in the nature of a "strike back" at independent refiners who during the past few years have greatly enlarged their own retail marketing facilities. Commenting on this situation, L. V. Nicholas, president of the National Petroleum Marketers Association, says in part:

"If the efficient refiners propose to duplicate our facilities with equipment of their own and compete with us for every gallon of available gasoline, and if the refiner who does not compete with us refuses to modernize his plant and sell us gasoline on a basis that enables us to compete on an equal footing with the refiners engaged in the jobbing business, then we can not afford to waste time in vain regrets over their shortsightedness, but must, as a matter of economic necessity, provide a modern source of supply of our own.

"Is it not more logical for the jobber who is already in possession of a growing patronage, who stands well with the consuming public, and has vast sums invested in his distributing facilities, to build a refinery to supply him his goods, rather than to sit idly by while his source of supply fades out of the picture through failure to keep abreast of modern development, or because he is bought up outright, or, worse yet, builds his own distributing stations to compete with us for our business?"

NEW GULF TRANSPORT COMPANY ORGANIZED

Organization of the Gulf States Terminal & Transport Co. as a subsidiary of the North American Tank Car Co. has been announced by the latter firm. The new company will be in operation August 15 handling petroleum and refined products for export at Westwego.

The plant of the new company consists of tank car unloading facilities for 150 to 200 cars daily, three new 55,000-bbl. steel tanks, four separate pipe lines with pumping facilities for clean and refined oils as well as for black crude and fuel oil with a minimum capacity of 2,000 bbls. hourly, and berthing and wharf facilities for tankers of any size.

The new company also has obtained sufficient land and wharfage so it can increase its storage facilities whenever necessary.

The company will be under the direction of N. L. Witherup, president, formerly superintendent of terminals, in charge of all Gulf Coast shipments for the Atlantic Refining Co. The compnay will have its own inspectors to test the gravities and qualities of the different oils received.

Westwego, the site of the new plant, is adjacent to the Texas Pacific and Missouri Pacific terminal yards, and a barreling and base good plant.

CLOSING OF LONG ISLAND REFINERY MAY MEAN REMOVAL TO SPARKHILL

By N. O. Fanning

NEW YORK, Aug. 3.—The closing of one of the Long Island City refineries of the Standard Oil Co. of New York "for an indefinite period" is regarded as significant here. The plant covered two city blocks and employed 400 men before it was shut down.

Gossip in oil trade circles, generally accredited, is to the effect that the modern equipment in this plant will be used in the construction of a new refinery at Sparkhill, N. J., where the company now has a large block of acreage and a crude oil tank farm.

The plant which closed, located at Long Island City, N. Y., on the East River, is connected by the line of the New York Transit Co. with the western Pennsylvania fields. This pipe line passes under the Hudson River at Sparkhill, N. J., and therefore will operate in connection with any plant which may be built there. It will continue to send crude, however, to the Standard's tank farm at Sparkhill.

Although the step may not be taken for some time, it is reported that the Standard Oil Co. of New York will ultimately move its entire manufacturing operations to Sparkhill as the latter point offers large facilities for manufacturing and tankage, and ample room for growth. It is equipped with loading docks for large oil tankers and in fact has advantages in every respect over the site of the present refinery. Naturally any change that is made will be gradual and it is emphasized that no immediate removal from Brooklyn is contemplated.

The Sparkhill site is in New Jersey on the Hudson River about 20 miles north of Bayonne, N. J., where the Standard Oil Co. of New Jersey's refinery is situated. It was purchased several years ago and is understood to comprise several hundred acres.

Was Pioneer Refinery

The Standard Oil Co. of New York plant at Brooklyn and Long Island City (both in "greater New York") had its origin in one of the first refineries in the United States, the Pratt Works operated before John D. Rockefeller entered the oil business, and therefore before the Standard Oil Co. came into existence. These works were taken over by the Standard Oil Co. in 1882 but had been in existence since 1857.

Up to a comparatively few years ago, the Standard Oil Co. supplied the bulk of its territory, comprising New York State and New England, from refined products manufactured at the Brooklyn refinery. The oil business, however, outgrew the capacity of the plant, which could not expand due to its being surrounded by other manufacturing plants. When the Standard Oil Co. of New York obtained control of the Magnolia Petroleum Co. it was able to supply its great territory with the help of that company's refinery at Beaumont, Tex.

But still the demand for oil products, especially gasoline, grew so fast that neither Standard of New York, with existing refineries, and Magnolia Petroleum, combined, could supply it. The next step was the construction of a refinery at Providence, R. I. At present the New York refinery supplies only a small percentage of the company's market requirements.

The New York plant actually consists of several separate units, principal of which are the "Pratt Works" and "Stone and Fleming Works." These and the Devoe Works have a combined capacity of approximatley 23,000 bbls. daily.

New Order Ushered in

The removal of the New York plant to Sparkhill, N. J., is a project closely linked with modern methods of marketing. It is expected that ultimately the inland waterways will be more generaly used in the distribution of oil products. The Standard Oil Co. of New York has been especially forward in this development, having added a large number of oil barges to its fleet in the last two or three years.

Oil can be barged up the Hudson River with great convenience from Sparkhill, N. J. The Hudson and Erie Canal, with accessory waterways, can supply most of upper New York State with oil products, including such largely populated cities as Albany, Schenectady, Rochester, Utica and Buffalo.

As to the New England territroy, the Providence refinery of the Standard Oil Co. of New York and the Beaumont plant of the Magnolia Petroleum Co., it is understood, are now supplying the bulk of the company's marketing requirements there. For the first time in the history of the oil business, the Standard Oil Co. of New York has been delivering oil products direct to Boston from the Beaumont refinery in cargo lots. The large gain in consumption has made this necessary.

In addition, oil has and will be barged from the Sparkhill site up the coast to New London, Conn., Providence, Fall River, Boston and Portland. In other words, water transportation will be utilized as far as possible because of its conveniences and economy. The Sparkhill site will lend itself unusually well to the development of water transportation for the company's refined products.

It may be that the Brooklyn refinery will be retained for the manufacture of special products, and that a plant will be built in Sparkhill as an addition to existing capacity.

HOLDS CITY HAS RIGHT

LINCOLN, Nebr., Aug. 3.—Holding that this city, under its charter, had a legal right to engage in the retail gasoline business, Judge W. E. Stewart in district court sustained a demurrer entered by the City of Lincoln to the injunction suit brought by the Standard Oil Co. of Nebraska against the operation of the municipal gasoline station.

As the case was to be appealed no matter what the decision, to hasten it to the Supreme Court, the court refused to hear the 300 page brief prepared by the Standard Oil Co.'s attorneys citing decisions and precedents upon the points of law involved.

NEW UNION OIL STATIONS

SAN FRANCISCO, Cal., Aug. 3.—Eight new service stations have been opened in California, Oregon and Washington by the Union Oil Co. of California. The stations are at Spokane, Seattle, Portland, Wilmington, San Diego and San Francisco.

NEW FLORIDA STATIONS

MIAMI, Fla., Aug. 3.—The Mexican Petroleum Corp., subsidiary of the Pan-American Eastern Oil Co. (Standard Oil Co. of Indiana and associates), is completing several large bulk service stations in Florida.

NEBRASKA GASOLINE SALE

LINCOLN, Neb., Aug. 3.—Gasoline tax collections during June benefitted the State of Nebraska to the extent of $244,275.44, according to a report just announced. The tax, which is 2 cents a gallon, was paid on the sale of 12,213,777 gallons.

TO ENLARGE REFINERY OF WEST TEXAS CONCERN

OKLAHOMA CITY, Okla., Aug. 3.—Expenditure of $300,000 will be made in improvements and enlargement of the West Texas Refining & Development Co.'s plant at Colorado as a result of the sale of a half interest in the refinery by Anderson-Pritchard Oil Corp. of Oklahoma City to the California Co. of California. The refinery will be enlarged from 1,500 to 5,000 bbls. capacity. The Anderson-Pritchard Corp. will continue to operate the plant with headquarters at Oklahoma City.

In addition to the sale of a half interest in the refineries and pipe lines, all of the producing properties of the Anderson-Pritchard in Mitchell County, Texas, were included in the transaction.

WHITE EAGLE FILES SOUTH DAKOTA SUIT

PIERRE, S. D., Aug. 3.—The White Eagle Oil & Refining Co. of Kansas City, one of the largest distributors of gasoline in South Dakota has filed suit against the State to restrain the highway commission from using funds to purchase gasoline which is also sold through State owned stations.

The papers in the suit were submitted by the White Eagle company. In addition to the highway commission, Governor Gunderson, the attorney general, State auditor and State treasurer are made parties to the suit. It is expected that the hearing will take place next week before three justices of the Supreme Court.

The White Eagle's action, which has been rumored for some time was the most important development of the week in the gasoline war inaugurated by the State following the recent advance of 1 cent in gasoline prices. Five State owned filling stations are already in operation with plans announced for the operation of at least 20 more. The stations in operation are generally retailing gasoline at a price 4 cents under that asked by most of the private distributors.

MARINE SERVICE STATION

SAN DIEGO, Cal., Aug. 3.—As complete as the most modern gasoline station, a marine service station boat has been opened at San Diego Harbor by the Union Oil Co. of California. The barge, the "Coronado," carries 20,000 gallons of varied petroleum products, including every kind of refined oils and greases used on the hundreds of commercial and pleasure vessels which make San Diego their headquarters. The barge also can supply fresh water and is equipped with rest room and other conveniences of an automobile service station.

GARAGEMEN'S UNION, INC.

OMAHA, Neb., Aug. 3.—Articles of incorporation have been filed with the Secretary of State at Lincoln for the Garagemen's Union, Inc., of Omaha. The new organization has been started to buy and sell petroleum products.

CURB PUMPS BARRED

NEW YORK, Aug. 3.—Curb gasoline pumps constitute a public nuisance and no municipality has the right to permit their erection, according to a ruling of the appellate division of the New York Supreme Court.

ENLARGE COMPOUNDING PLANT

CHICAGO, Aug. 3.—Capacity of the Huegel-Nugent Petroleum Co.'s compounding plant here will be virtually trebled when the improvements and additions, now under way, are completed.

Numerous Factors in Heat Exchange

Rate of Heat Transfer in Natural Gasoline Plants Construction Varies With Materials and Types of Equipment. Other Phases Considered

By Frank P. Peterson

In the last preceding article, appearing in the April 16th issue of The Oil and Gas Journal under the caption "Condensers, Coolers and Heat Exchangers," in which was presented a simple type of equipment detail, applicable for all of these functions, I left the subject as applied to plant design uncompleted. The computation which will determine the amount of such equipment necessary for a given case must take into account the amount of heat to be transferred. This is a known factor within close approximation. The rate of heat transfer, expressed in terms of K we find from data or practic or assume it, and from its use, if we have the other necessary data to which reference was made previously, we may determine the surface area of the tubes and shells within which we will effect the condensing, cooling and exchanges required.

In the previous article we left the matter for a given case at the point of a developed mean temperature difference of 47.3 for a given condition of end temperatures in an exchanger which happens to be, for practical purposes, the specific case of Mid-Continent Petroleum Corp.'s Plant No. 7, located at Cromwell, Okla. In this case, we know the area of exchanger surface, so we may find K.

Assume an oil circulation factor of 30,000 gallons per hour. The weight of the oil is, roughly, 7 pounds per gallon. Consequently, the oil circulated (both ways we may assume, though this is not strictly the case), is 210,000 pounds per hour. If we are cooling oil or gas or vapor with water, we must take into account also the specific gravity of the materials. The gravity difference for the hot and cool oil streams is small and I think we may neglect its use.

We may take then as the weight (gal lons times pounds per gallon), of oil passing per hour=W.

Also let temperature loss in the stripped oil stream through the exchanger=L.

And the surface of tubes or other walls through which heat transfer takes place =S.

We shall find:

$$K = \frac{W \times 0.5 \times L}{D \times S}$$

0.5 being the approximate specific heat of the oil.

And, for any case, if we have K or assume it, we may transpose the equation and find S

$$S = \frac{W \times 0.5 \times L}{D \times K}$$

S is what the designer of plant wants. He doesn't care about K or other factors, which to the practical men who so often undertake the responsibility of building and equipping large plants would seem desirable in simple form, such, for instance, as the number of sheets of iron and sticks of timber required to build a pump house. Unfortunately, in the present stage of the art, it is not so; but as we go forward, we shall shortly have reached a set of values to apply for our mean temperature difference factors, our K's, etc. And then the rig builder, the diligent carpenter or the practical mechanic can use the information to the same end as the engineer who now seeks supporting data in correct form to present for such use.

Heat Transfer

Very few manufacturers of condenser equipment are now in possession of all the data essential to design. They naturally guard it very closely. It applies to their own special forms of construction.

FLEXIBILITY NECESSARY IN CONSTRUCTION

The varying amount of work to be done through the life period of a natural gasoline plant imposes the important consideration of varying the amount of cooling, condensing and heat exchange equipment to suit the varying amount of duty imposed on the plant. At the beginning the duty will be maximum and at the end, minimum. Speed of circulation of hot and cold absorbent oil through a unit area of heat exchanger for instance will vary directly as the volume of absorbent in circulation. Rational plant design will therefore provide heat exchangers in number and kind so manifolded that they may be removed as duty upon the assembly decreases and in such manner that speed of absorbent may be maintained at a fairly constant rate, thus maintaining rate of heat transfer at a high value and releasing units of equipment for salvage and transfer to other plant duty.

This important feature in plant design is discussed by Mr. Peterson in the accompanying article with definite data as to how the natural gasoline manufacturer can obtain this needed flexibility in his plant construction.

The accompanying article is the seventh of a series by Mr. Peterson, one of the veteran plant operators of the Mid-Continent Field. Previous articles have dealt with the selection of plant sites, type of equipment, still construction and other practical phases of plant building and operation.

Let it be impressed that factor K is the all important one. It is the rate of heat transfer in the following unit terms: The amount (B. t. u., the unit measure of heat), transferred per square foot per degree difference (mean temperature difference), per hour from the heating medium to the cooling medium, or vice versa, through the tube walls of coolers, condensers or heat exchangers. And to make the matter still more interesting and complicated, K is not a constant to be assumed for all cases, but on the other hand, a variable of the rankest character. As previously stated it must and does vary for diversified materials and form of equipment. It varies widely for variable speeds of the media of fluids being treated and, consequently, with varied operation in one and the same kind and form of equipment.

Since this subject was left very much unfinished in the last article printed, and without explanation or apology, it is well now to confess that the writer had a faint ambition to ferret out a simpler, more direct application of the involved data which we could all appreciate, understand and very readily use, and that the case has not so resolved itself; that he has had to fall quite meekly into the trail of his superiors and do and see as they have done and seen. This is for lack of transcending genius, and quite possibly patience and perseverance, which he is still hopeful may have had reward.

Speed Factor

If, then, we summarize all the factors of heat exchanger computation, we must take the speed factor into account, and this will call for a little precaution that equipment, built or selected, may possess a balanced area inside and outside of the tubes.

If A = inside cross sectional area (square inches) of a tube shell, T = external cross sectional area (square inches) of a tube, At = internal cross sectional area (square inches) of a tube shell, N = the number of tubes built into a shell, for heat exchanger requirement.

A−(T×N) should equal At×N. If we have this balance then, of course, the speed factor will be

$$\frac{M \times 231}{A \times N \times 3600} = Fs$$

the speed of circulation in feet per second. Now Fs for the extreme case of pressure drop permissible, for instance, on the enriched side in its approach to stills, may be as high as 30. If the speed is to be maintained this high, however, exchanger arrangement must have a lineal extension so great as to permit a time element of as much as 8 seconds for the oil in its passage through the equipment. Certainly, this adds another factor to be considered in layout and arrangement of this detail of plant equipment.

If Te = time element and L = length of exchanger in terms of operative cross sectional area, the computation will take this form:

$$L = Te \left(\frac{M \times 231}{A \times N \times 3600} \right)$$

After having gone thus far through this maze of expressed formulae, we may come back to practice and note that all rule of thumb computations aside from assumptions in their resultant terms of mean temperature differences and heat transfers, K, are varied amazingly by adaptation of varied detail form of equipment.

One manufacturer resorts to a detail of inserting a twisted metal ribbon strip in his tubes, whereby he imparts an augur-like travel to the fluid in his tubes and one might, by allowing X to represent the measured length of the edge of the twisted metal ribbon, vary the last form of computation thus:

$$\frac{L}{X} = Te \left(\frac{M \times 231}{A \times N \times 3600} \right)$$

and finally,

$$L = \frac{T - \left(\frac{M \times 231}{A \times N \times 3600} \right)}{X}$$

Radiator Type

Another very logical approach has been made toward rational equipment for the performance of the heat transfer functions of a plant in a form of honeycomb radiator construction. This would seem to offer a highly commendable route tc the ideal solution of the film insulation resistance to the effective transfer of heat in exchangers of absorption plants. The honeycomb radiator type of equipment is open to a solution which will provide against its being subjected to excessive pressure. It is not built in form now available to withstand working pressure of more than a few pounds per square inch. A simple solution to make radiator sections immediately available to the industry for the purpose would seem to be along the lines of an automatic pressure control device, whereby the equipment could not be subjected to pressures greater than its safe limit.

One prominent producer of natural gasoline in the Mid-Continent uses only one arrangement of double pipes, 2-inch within 4-inch size. The main stream is split up into a number of parallels, and the whole structure buried beneath 2½ to 3 feet of earth. Mean temperature differences should be expected to reach 40 with this type of exchanger, and factor K may be assumed at 30.

The value of insulation should not be overlooked in the arrangement of exchangers, and in the last described type the efficiency of heat transfer as a whole performance will be satisfactory, as high, probably, as 80 per cent. The simplicity of such equipment would naturally appeal strongly to the practical minded man, but the cost, on analysis, is found to be disproportionately high.

But, we shall have to leave this subject of heat exchangers specifically unfinished, that is, to that extent, which admits a deficiency at least on the writer's part, in the comparison of data which will lead to definite expression in the limiting values that can be set up for the use of the lay-out man. And, notwithstanding, it still remains the purpose to submit what is best in the light of available data.

It would seem that the limiting factor in the selection of heat exchanger equipment is best expressed in terms of square feet of exchanger tube surface per gallon absorbent oil to be circulated per hour. This factor may be converted easily also to terms of square feet exchangers surface per gallon daily gasoline yield by simply assuming a saturation factor of say 5 per cent of the total daily oil circulation.

The data available to the writer at present suggest a factor for large plants of not less than 0.5 square foot of heat exchanger surface per gallon of oil to be circulated per hour in any case except that in which a responsible manufacturer of equipment will guarantee satisfactory or specified performance on a lower surface footage factor.

The equivalent factor in terms of square foot surface per gallon daily gasoline yield, (basis of net recovery of 5 per cent of the oil as saturation) is 0.6.

Limiting Factors

After all has been said in terms supported by summarized data of the subject, it is well to note that provision of exchanger equipment may be within the limit suggested without sacrifice of plant yield for a given case in which water and residue fuel gas is to be plentiful and relatively cheap. This means simply that rational design, as embodied in plant assembly, may take into account these factors and where known gas volume decline curves or measurable water supply will justify a reduction in heat exchanger investment, the qualified engineer may allow his judgment to prevail.

The foregoing cannot be true for the case of cooling of the gas to be treated or the condensing of gasoline vapors or the cooling of absorbent oil on its way to absorbers except in some measure as related to available cheap volume and quality (temperature) of the water to be used. The cooling duty called for in terms of heat volume is inflexible. Given the heat volume factors to be handled, the heat transfers efficiency factors, K again, for each case, the surface footage required may be computed along lines similar to those for the case of oil to oil exchanges of temperature. It may be stated that the type of equipment thus far used has been almost wholly of the

(Continued on Page 130)

Brief Items for Plant Operators

LOW PRESSURE BURNER EFFECTS FUEL SAVING

A 10 to 15 per cent saving in fuel costs has been accomplished at the Cushing, Okla., refinery of the Cushing Refining & Gasoline Co. through the installation of a low pressure type of gas burner which was designed by Earl Fogleman, superintendent of the plant. The burner is now used in both still and boiler firing.

As shown in the accompanying picture, the burner was installed without changing the archways of the furnace. The larger 1½-inch lines shown in the picture connect to a 3-inch header

underground. Four one-fourth inch burner lines lead from each of the 1½-inch lines, making a total of 16 burners under each still. The air mixture is regulated by means of the 2-inch slides on each burner line. The end of each burner line is split by means of a thin sheet of metal.

The burner in operation has given the substantial saving in gas used at the plant previously indicated. The fuel economy, according to Mr. Fogleman, is due to the better combustion and more equal distribution of heat. The low pressure feature also simplifies fire control for the stillmen and boiler firemen. Before reaching the header, the gas pressure is reduced to 1½ pounds which is maintained without the usual fluctuations of the burner previously used with a higher gas pressure.

NEW CORRECTION TABLE FOR PETROLEUM OILS

The Bureau of Standards in Letter Circular LC 160 (revised July 14, 1925) has issued an abridged volume correction table for petroleum oils. The table has been approved by the American Petroleum Institute, the American Society for Testing Materials, the Bureau of Mines and the Bureau of Standards.

The table was prepared to meet a demand from the oil industry for a short and convenient table for reducing oil volumes to the basis of 60 degrees Fahrenheit when extreme accuracy is not required. It is not intended to replace the more complete and accurate volume correction table contained in Circular No. 154, but rather to supplement it and especially to replace the various abridged tables and approximate correction factors heretofore employed in the oil industry. In case high accuracy is essential the complete table contained in Circular No. 154 should be used, especially if large volumes or wide temperature ranges are involved. To avoid possible confusion all contracts should state which table is to be used. The abridged table is based on the same data as Table 2, Circular No. 154.

PLANT FOR EXTRACTING LUBS FROM ASPHALTUM

OKLAHOMA CITY, Okla., Aug. 3.—Garry M. Gordon, who has contracted for the erection of a five-ton demonstration plant in Carter County, where lubricating oil will be extracted from asphalt, believes that in the vicinity of the Arbuckle Mountains is enough asphalt to supply the United States with lubricating oil for many years. Gordon has a new process for treating the asphaltum, by which, he says, lubricating oil may be extracted at a cost of 30 cents a barrel.

He purposes using asphaltum sands as well as pure asphaltum deposits, and estimates that 3 bbls. of lubricant is contained in the average ton of this sand. Experiments have been made in a small plant he installed near Woodford in Carter County.

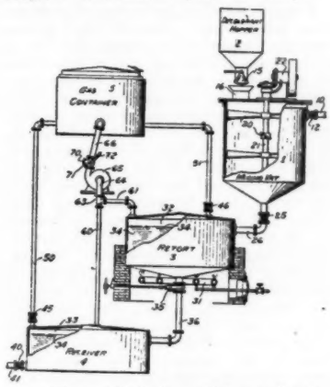
No attempts have been made before in several years to convert asphaltum deposits in southern Oklahoma into useful products. In the vicinity of Loco, Stephens County, and near the Healdton Field, asphaltum mines were operated 20 years ago and some underground likes of liquid asphaltum were discovered. Asphaltum itself either proved too expensive or inefficient for road construction purposes and as oil fields were developed no effort ever was made to take oil from the asphaltum deposits.

GASOLINE SPECIFICATIONS

The Oklahoma Corporation Commission will hold a hearing on August 8 in regard to the changes the state proposes to make in gasoline specifications. The proposed changes apply only to gasoline sold within the state. It is expected that on that date representatives of the Western Petroleum Refiners Association and the Association of Natural Gasoline Manufacturers will appear before the commission.

Recent Patents

1,547,682—Process for decolorizing and stabilizing oils. Paul W. Prutzman, Los Angeles, Calif., assignor to General Petroleum Corp., a corporation of California. Filed April 19, 1921. Serial No. 462,670. Two claims. (Cl. 196—147).



1. The method of purifying and partly decolorizing hydrocarbon oils which consists in intermixing with the oil to be treaded a powdered solid adsorbent, heating the mixture in a substantially closed vessel to a temperature at which the oil decomposes appreciably, to permit the adsorbent to withdraw the maximum quantity of coloring matter from the oil, steaming the hot mixture to carry off the decomposition products evolved, and finally separating the spent adsorbent and its contained coloring matters from the decolorized oil remaining in the vessel by mechanical means.

1,545,440. PROCESS FOR REMOVING ASPHALT AND OZOCERITE FROM MIXTURES OF HYDROCARBONS. Heinrich Neumann, Graz, Austria. Filed November 30, 1921. Serial No. 518,992. 2 Claims. (Cl. 196—44.)

1. A process of removing asphalt-like constituents and separating ozocerite-like solid hydrocarbons from mixtures of hydrocarbons which comprises intimately mixing such mixture of hydrocarbons at a raised temperature with water, which contains the ions of trivalent iron and halogen ions, allowing the mixture to settle to form an oily and an aqueous layer, and cooling the oily layer to separate therefrom the ozocerite-like solid hydrocarbons.

DISTILLATION TEST OF DEEP GARBER OIL

Many refiners in the northen part of Oklahoma are now closely watching developments in the deep sand area of the Garber Field which from present indications will furnish a large amount of high gravity crude. The discovery well of the field, known as the No. 25 Belveal of the Sinclair Oil & Gas Co., was brought in at 4,377-4,414 feet, on April 1, and has since shown a large settled production. The production on July 31 was 1,840 bbls.

It is expected that approximately 15 wells will reach the deep sand some time this month and, based on the production of the discovery well, will greatly add to the amount of crude available to plants operating in that section as well as the major pipe line companies.

The following distillation test was made recently by the Tulsa Laboratories, Inc., of Tulsa., of crude taken from the Sinclair well. The 1,500 cubic centimeter charge had a gravity of 42.2 degrees Baume, A. P. I. A 2,000 cubic centimeter flask was used with an Engler dephlegmator.

Per Cent Off	Temperature (Degrees F.)	Gravity A.P.I.
6	206	76.4
8	220	69.0
10	226	66.7
12	234	64.1
14	240	62.4
16	250	61.0
18	270	59.1
20	276	57.6
22	282	56.8
24	288	55.7
26	310	54.3
28	320	53.2
30	326	52.7
32	342	51.6
34	354	50.1
36	366	49.1
38	376	48.5
40	388	47.5
42	410	46.8
44	416	46.1
50	462	43.2
52	472	42.2
54	486	41.4
56	506	40.6
58	518	39.5
42	Fuel Bottoms	30.2
100		

Recapitulation: 40 per cent 58.9 Baume gasoline; 18 per cent 43.1 Baume kerosene; 42 per cent 30.2 Baume fuel bottoms.

Gasoline distillation from gasoline cut: Gravity, 58.9 Baume A. P. I. I. B. P. 120 degrees Fahrenheit; end point, 440 degrees Fahrenheit.

Per Cent Off	Temperature (Degrees F.)
10	182
20	206
30	222
40	240
50	256
60	274
70	294
80	318
90	360
95	410
98	440

1 per cent residue.
1 per cent loss.

AMONG THE TECHNICAL MEN

D. H. Hyler, superintendent of the refinery of the Sapulpa Refining Co. (Continental Oil Co.), at Sapulpa, Okla., first started to learn the business of refining crude petroleum at Independence, Kans., where he was employed by the Petroleum Products Co., starting in 1913. He was born in Marietta, Ohio, and attended Marietta College previous to moving to Kansas.

D. H. Hyler

The war in 1917 stopped his employment with the Independence concern. Twenty-seven months were spent in the employment of Uncle Sam, including 14 months of active service in France, where he held a commission as first lientenant in the Tank Corps.

Following his discharge from the Army, Mr. Hyler returned to Independence, Kans., where he was employed by the Standard Asphalt & Refining Co., successors to the Petroleum Products Co. Late in 1920, he became connected with the Sapulpa Refining Co., at Sapulpa, Okla., in the capacity of assistant superintendent.

In 1922, he was made superintendent by the Lion Oil & Refining Co. in the building of a 10,000-bbl. refinery at El Dorado, the largest plant in Arkansas. He continued with the Lion company until the plant was completed and in operation.

In 1923, he was employed by the Mutual Oil Co. to do special work at its Glenrock, Wyo., refinery. After the Mutual, now known as the Continental Oil Co., had taken over the Sapulpa Refining Co., Mr. Hyler, due to his thorough knowledge of the Sapulpa refinery, was placed in charge in July of last year. Since that time the operation of the plant has been greatly changed with a large amount of new equipment installed.

CHICAGO GASOLINE MARKET WEAK DESPITE RECORD IN CONSUMPTION

By J. B. Waldo

CHICAGO, Aug. 1.—The very beginning of August finds the gasoline market in Chicago decidedly weak, not to say demoralized. The usual explanation is that the refineries have overrun, but as there is a certain proportion between the quantity of gasoline and heavier oils, it would seem the output of fuel oils must have been equally excessive. Such does not appear to be the case. A certain quantity of fuel oil is used in the cracking stills, but this should reduce the stocks of fuel oil while increasing the output of gasoline. This may be a contributary cause to the recent condition of stocks of gasoline and fuel oils.

All available sources of information regarding the consumption of gasoline show the quantity used to date has been far greater, yet owing to the present system of operating the distributors have been able to hold back their orders whenever gasoline was at the high point and thus force an adjustment of prices to meet their views as to prices to a great extent. The demand for fuel oil has not shown as large an increase over last season, users have held back and are in a great many instances still holding their orders down to minimum requirements, yet the market is very strong and advancing. This is a condition puzzling the dealers. Some who guessed that the situation favored lower prices and sold have been obliged to cover at a price above the price at which they sold, while buyers of gasoline have found that no matter how cheaply they bought they could buy at a lower price a little later.

The majority of the oil men in this territory would be greatly surprised if the gasoline market advanced. About the best they expect is that it will hold its own and they base this belief largely on stocks which they are told are held in the Mid-Continent Field or which they know to be there by their own observation. One of the best posted and one whose judgment is seldom at fault returned this week from several weeks in the field and speaking of gasoline stocks, said that in spite of large shipments from the refineries there was a lot of gasoline left and refiners had lost confidence in the market. He said refinery runs were not being reduced except here and there and that when the refiners saw their July statements he believed many of them would get a shock.

The weather conditions have not been as favorable as during the earlier part of July, but still not really bad. Roads are still good but there has been some rain and some cooler weather. Still reports on consumption are favorable. Yet the distributors are in position to hold back and create the impression at least that they have sufficient stocks of gasoline to run for some weeks, and refuse to purchase except at concessions. When they get some concession they want more, and the lower the price the lower they want the price quoted. The demand on marketers continues uneven, good on occasional days and fair to poor most of the time. The bulk of the business during July was probably pretty fair but it did not reach expectations and the way it came made it seem less than it really was. The larger demand is still for the 56-58—450 gravity and for some time this has been the grade most freely offered but at the close of the week there was a disposition by refiners to push the sale of the U. S. Motors and the higher gravities and the prices of all were weak. The U. S. Motors grade was being freely quoted at 11¾ cents for resale and at 12 cents to the trade and some of the latter claimed they had been quoted direct by refiners at the former price. The 56-68 gravity was priced as usual, one-half cent under this quotation for the Motors gasoline.

Kerosene More Active

Kerosene was more active and right at the close a demand made itself felt for the 42-44 gravity, which caused the marketers some trouble. Offerings were light for this gravity and the prices out of line with the quotations made for the 41-43 grade. Apparently this demand came from the northwest as it was concerns with a larger business west and north of this market that noted the strength of the demand for the higher priced oil. Refiners quoted 4½ cents for the 42-44 and 4 to 4⅛ for the 41-43 gravity.

Furnace Oil in Demand

Furnace oil is in great request. Some large refiners have advanced their prices over the season on contracts and for a good distillate now ask 4⅛ to 4¼ cents for the season, an advance in one case from 3½ cents, the opening price. The actual spot demand is growing as distributors stock up for the early business. Of course there is little if any actual consumption, although in the cooler northern territory some oil has been burned. Manufacturers of oil burners are very optimistic and some claim they are booked for all the installations they can handle during August and September. But on the other hand there is some complaint from salesmen selling the house owners that they find the going rather slow this summer, but that the fall will see a large number of orders placed. A good share of the summer orders have been taken from builders of new homes and apartment houses, as the oil burner in the basement makes a good talking point. There are lots of estimates of double the sales of oil over last year, but oil men, as a rule, who have an extensive trade in furnace oils with customers are setting their predictions at around 25 per cent, which they base on the number of oil burners installed or estimated to be installed from April 30 to October 1. Of course, the plan of a "small down payment and 10 months to pay the balance" is making it more easy for the average home owner to buy an oil burner. There is this much certain, there will be a larger demand for furnace oils ranging from prime white distillate to a heavy gas oil or light fuel oil than a year ago. By the end of next April the industry will know a lot more than it does now regarding all phases of the oil-burner industry, from the grades of oil that can be successfully consumed by the various types of burners to the best way of serving the consumers of furnace oil.

Gas oil is not an important article right now in this market. There has been some sales of oil for storage for furnace-oil demand, some sales for immediate consumption and a little business with the smaller gas companies, but the larger demand has not been felt. Prices have just about held their own. Offerings are fairly large. Some refiners are holding for better prices and base their ideas on the fuel-oil market rather than on present demand.

Fuel Oil Puzzling

Fuel oil is still rather a puzzle. Quite a number of dealers felt sure the market would be easy through the coming month and refused to buy when offered what now looks like very low prices, as they believed these prices would be lower if they waited awhile. Others bought at what then seemed high prices, but which today show a good profit, and they have their reward. There is little disagreement that there is a good deal of fuel oil in storage. The future seems to hinge on the demand. Some see a great coal strike and a vast demand for fuel oil. Others are equally sure at the last minute there will be a compromise. The chance is that in the end the old scale will be renewed with little or no modification and coal will be as plentiful. There is apparently some grounds for the belief the railroads and large manufacturing industries that have been buying little or less of fuel oil will sooner or later be forced to purchase more liberally, but it is not impossible many industrial plants will continue to buy lightly and frequently and let the refiner carry the stocks. There will be a minimum of Smackover fuel oil in this territory this season. The Standard Oil Co. of Louisiana is now operating its new line to Greenville, Mass., from which it transports the crude by barges to the refinery at Baton Rouge. This will constitute a steady demand for Smackover crude. The operation of the new pipe line should release for use elsewhere a large number of tank cars and this may be felt in the market for refined oil where it has been the habit of late to blame the lack of dirty cars for the high prices asked by refiners for their fuel oil. Late in the week marketers who were known to own fuel oil bought at around 90 cents were offered $1.02½ for their fuel oil and the owners refused to accept it. At the same time one of the large steel plants that was in the market for 30 cars of 24-26 gravity told a bidder all their orders except one were at less than $1 and they placed the order at materially less than that figure, probably at 97½ cents. The usual asking price for 24-26 refinery fuel oil at the close of the week was $1.05 at the refinery, and for the lower gravities the same price was usually asked with a 5-cent advance for each higher gravity. The marketers and dealers were seeking to secure $1.10 a barrel and claimed this price would prevail within a week. The facts regarding stocks in consumers' tanks are not well known. Some refiners claim their railroad customers have been drawing more than their contract quantities and must have considerable accumulations. On the other hand, large industries order very small quantities and need quick deliveries. During the last week, a large concern having at least 300,000 gallons storage had to have a car immediately and paid a handsome premium for the delivery. There seems a real plan on the part of many industries to operate with a little more confidence this fall than they have been doing. Many important industries are reducing their prices; for example, the automobile, plate glass and textile industries. The obvious inference is that it is done to increase sales, in which case they will require more fuel, as larger sales will lead to more active operations. The local market right now is divided between those sellers who own fuel oil for future delivery, bought at between 90 cents and $1, and those who have contracts and owe fuel oil sold at approximately the same prices and less. The desires of each group are obvious, and the question as to which group is to be the winner is to be decided by the staying power of the refiner and the larger consumer. It would seem equally obvious a reduction of runs would help the refiner to maintain and even advance the price for fuel oil. The result of such action would be certain. The extent of the demand during the coming fall and winter is more or less problematical, although some increase would be seasonable and is assured. Large producers of Smackover fuel oil are asking $1 spot and advancing their prices 5 cents a month for the nearby future.

Lubs Quiet

Lubricating oils are rather quiet and the prices are a little less firm in tone. Some have done a much larger business than a year ago, but others have not equaled the record of 1924. There has been an overproduction and the concerns that pushed the hardest for business have done the best. There is a marked tendency with refiners who have a line of lubricating oils to make contracts that call for the purchase of lubricants as well as gasoline and kerosene from their refinery. As one sales manager says, we want our customers to buy their spices as well as their sugar from us.

Furnace Oil Dumps

Distributers of furnace oil are not having an easy time of it. They wanted to have a price based on a minimum dump of 400 gallons, but the Standard persisted in basing its price on 150-gallon dumps. The opening price was 8½ cents, but as the result of price cutting this was reduced to 8 cents, and the consumer can contract today for a winter's supply at 8 cents and need not take in more than 150 gallons at one time. The Standard management stated the bulk of the installations had 200-gallon tanks and this was through no fault of the house owner and they felt these owners should be considered, which they did by making a minimum of 150 gallons instead of 200 gallons as during previous seasons. There were a number of good features in the suggested program of the distributers, such as limiting the number of grades of oils to be carried. The original suggestion was for seven grades in all, including industrial, domestic and furnace oils. The grades were four industrial oils, including an 18-20 gravity Smackover crude, 18-20 refinery fuel oil, 24-26 refinery fuel oil, and 28-30 refinery fuel oil, 32-34 gravity dark gas oil, 32-36 gravity straw gas oil and a 38-40 gravity distillate. Most of the larger distributers have their own blending tanks where they can blend any required gravity. The blending is done with heated oils and these are usually fairly permanent, but some of the blends furnished last winter stratified during the cold weather in the user's tank, the heavier oil sinking to the bottom and refusing to flow at all causing much trouble and in many cases the removal of really adequate burners.

NORTH TEXAS MARKET SOFT, THEN STRONGER

FORT WORTH, Tex., Aug. 3.—The gasoline market in the North Texas territory during the week softened and later showed signs of strengthening. Fuel oil, gas oil, kerosene and natural gasoline are all stronger. Gasoline was also stronger the latter part of the week as there was considerable inquiry. Predictions are the market will not recede farther at the present unless some further depressing influence should be felt.

Motor oil is quoted at 12 cents, the market being steady. Late in the week a price of 11½ cents was being bid freely for 56-58, 450 end point gasoline and little could be had at this price. Earlier in the week 150 cars had been purchased at this figure. The market is now 11½ to 11¾ cents.

Between 1,500,000 and 2,000,000 gallons of 64-66, 375 end point gasoline was purchased during the week in North Texas territory for export purposes. In addition there was a shipment of 64-66, 390 end point material purchased for shipment to Canadian points. Of this entire amount, about one-fourth was bought for 14⅛ cents while the balance brought a price of 14¼ cents.

The kerosene market is considerably stronger. About 80 cars of 41-43 prime white kerosene were purchased in North Texas during the past week, about one-third of which brought 3⅞ cents and the balance brought 4 cents. Water white kerosene was quoted at from ⅛ to ¼ of a cent higher than the prime white.

The market on natural gasoline showed very little change but was characterized as slightly stronger, with prices on all grades ranging from 14 cents to 14¼ cents.

Prices on gas oil are unchanged, but the market is considerably stronger. Quotations are 3⅛ to 3¼ cents, and unusually strong at those prices.

Fuel oil is showing more remarkable gains than any other commodity. The market this week is a full 5 cents in advance of prices prevailing a week ago. Prices now range from $1.05 to $1.10 per barrel and the market is very strong. The strength in the North Texas fuel oil market is attributed to refiners making only a comparatively small amount of fuel oil at this time and the railroads are particularly heavy buyers right now.

INCREASED CAPITAL STOCK

AUSTIN, Tex., Aug. 3.—Southwestern Refining Co., Houston, increased its capital stock to $300,000 by charter amendment.

WEAKNESS IN EASTERN MARKETS AND GASOLINE PRICE WARS SPREAD

By N. O. Fanning

NEW YORK, Aug. 1.—Indications of weakness in the refined oil markets on the Atlantic Seaboard were more numerous during the past week. "Price wars" broke out in the gasoline market in several sections of the territory, with prices cut 2 cents per gallon or more by the large companies. One interesting phase of these price wars is that price cutting is prevalent among the larger companies, and cannot be laid at the doors of the smaller independents. Several big oil concerns that had not formerly tried to sell much gasoline in the East are now coming in on a large scale, and some find it necessary to cut prices to draw business their way, according to best reports.

There is now every appearance of a lower tank wagon structure. Price cuts throughout the territory are expected within a week or two. Of course developments can happen to change the outlook, but leading oil marketers are pessimistic at present.

Tank car gasoline is still firm at 15 cents, with small offerings reported at slightly below that figure. However, the weakness is not in the tank car market, but lies in the competition at service stations, of which there seem to be too many just now.

The cause of the change in the outlook lies in the large production of gasoline, which is directly traceable to the recent optimism. Despite a record demand, refiners of the country have not only been able to keep up with it, but with the exception of a few months in mid-summer, perhaps, ahead of it. Any slowing down in consumption is bound to be reflected in prices.

Although gasoline consumption has held up well, the weather is not so favorable as it was during the Spring. Steady rains are now prevalent with the outlook for this week-end not especially bright.

Kerosene Unchanged

Almost nothing can be said with regard to the kerosene market. Kerosene prices and the general kerosene situation rest largely upon the course of gasoline. Consumption has been diminishing, with the supply ample.

Gas and Fuel Oil

Continued firmness in gas and fuel oil is attributed largely to the use of these products for cracking. Many refiners, it is reported, have been mixing cracked gasoline with casinghead in order to obtain an average quality for domestic marketing purposes. At the same time with California, Mexico and Arkansas yielding less heavy oil, fuel and gas oil for cracking purposes are becoming scarce.

The demand for both gas and fuel oil has been slow, so far as sales to consumers outside the oil business are concerned. Price changes are not expected.

Lubricating Oils

Although prices for lubricating oils are unchanged, a firmer tendency is noted in the trade. Demands from industrial sources has been steadily improving, as manufacturing activity in steel and other important lines has increased.

Paraffin wax has responded to a better domestic demand by showing an upward price tendency, especially for the lower melting points.

The export market at New York is improving due to larger demand for cased gasoline and kerosene on the part of Oriental, South American and African buyers. Distributors have been buying from hand to mouth and are now understood to have small stocks in their tanks.

A softer tendency in export prices is reported, due largely to careful buying by European distributors, who still hold out for lower prices. Practically no new orders have come in to Atlantic Coast refiners for cargo lots during the last few weeks, what little business being done having gone to Gulf Coast and California refiners.

So long as the market for cased kerosene remains at its present level, exporters will have little to worry about. During the past week the movement out of New York was reported at 1,422,860 gallons, against 2,469,800 the preceding week and 3,084,150 gallons two weeks before. Cased gasoline has also been moving at a very favorable rate, with weekly shipments well above 1,000,000 gallons for the past few weeks.

The following table shows the principal exports of petroleum and petroleum products from New York during the past three weeks (excluding bulk shipments which are not reported); figures in gallons unless otherwise noted in parentheses:

	Week ended		
Gasoline:	July 29	July 22	July 15
Cases	1,250,930	1,067,410	1,795,300
Kerosene:			
Cases	1,422,860	2,469,800	3,084,150
Lubricating oil:			
Barrels	1,080,400	834,950	629,000
Cases	47,800	102,940	55,230
Paraffin wax:			
Bags (lbs.)	217,140	281,600	1,114,300
Petroleum asphalt:			
Barrels		1,024	
Lubricating grease:			
Barrels	2,067		
Petroleum coke:			
Bags (lbs.)		2,208,040	
Crude oil:			
Barrels		291,050	18,820

The foregoing figures include only larger items of export, such as case shipments of 1,000 cases or more and barrel lots of 500 barrels or more.

Tanker Charter Market

No new fixtures in the oil tanker charter market have been reported during the past week. One factor says:

"The situation so far as the tanker charter market is concerned cannot be painted too black. Charter rates are now below cost of operation. This is driving many tankers out of the market.

"Charter rates are below pre-war levels. Fixtures as low as 18 cents per barrel between Gulf and North Atlantic ports represent a loss to operators of tankers. Boats can be chartered for the trade between Mexico and ports north of Cape Hatteras on the Atlantic Coast for 21 cents. Several years ago the rate was about 50 cents."

It is understood several large operators of tankers have taken vessels off the market because of low rates obtained. At least six are known to have been withdrawn and laid up for an indefinite period during the past two weeks.

This depression in the tanker charter market is particularly marked in vessels under American registry engaged in the intercoastal domestic trade or in the trade between Mexican and American ports. The reason is not so much a reduction in amount of oil carried but in the fact that more oil is being carried between Gulf and Atlantic ports and less between California or Mexican ports. More oil can be transported in tankers between the Gulf and Atlantic because of the shorter haul. Tankers formerly engaged in the California or Mexican trades have not therefore found occupation elsewhere and are being laid up.

Oil Receipts

The course of oil receipts at Atlantic ports indicates the condition in the tanker charter market just referred to. Receipts at Atlantic ports from the Gulf Coast have been increasing steadily, while those from California have declined. Imports have no more than held their own and in the last few weeks have slumped badly.

Receipts from the Gulf Coast during July expected to average about 400,000 bbls. daily, against 318,000 in July, 1924. Receipts from California will average about 68,000, against 85,000 a year ago. Imports in July are expected to average about the same as in July last year.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific Coasts of the United States, and imports, for the last three months; also monthly record for the last twelve months (figures in barrels):

	Week ended		
	July 29	July 22	July 15
Gulf Coast	400,000	443,000	410,000
Pacific Coast	57,000	70,000	78,000
Imports	95,000	77,000	189,000
Total	552,000	590,000	677,000

Daily Averages by Months

	Gulf	Pacific	Imports	Total
1925:				
June	379,000	66,000	118,000	563,000
May	312,000	81,000	145,000	538,000
April	353,000	78,000	101,000	532,000
March	273,000	82,000	135,000	490,000
February	262,000	51,000	147,000	460,000
January	311,000	77,000	133,000	521,000
1924:				
December	306,000	83,000	85,000	474,000
November	246,000	80,000	150,000	476,000
October	246,000	120,000	88,000	454,000
September	270,000	104,000	101,000	475,000
August	310,000	127,000	84,000	521,000
July	318,000	85,000	114,000	517,000

The foregoing estimates are based upon the carrying capacity of incoming oil-laden vessels.

Says Pan American Netted $18,000,000 First Half of Year

F. H. Wickett, chairman of Pan-American Petroleum & Transport Co., in an interview with Dow, Jones & Co. in New York, says the company earned $3,000,000 net a month in the first half of 1925. Gross ran at the rate of $10,000,000 a month. Mr. Wickett would make no prediction as to earnings for the second half of 1925.

Regarding the dividend, Mr. Wickett said he saw no reason for any change in the $1.50 quarterly rate at the next meeting, but added that the question of dividends had not been discussed.

In respect to production, Mr. Wickett stated:

"The company's policy regarding the production of crude oil is designed to take advantage of favorable oil conditions in the United States and at the same time to conserve its properties in Mexico. We are taking less oil out of Mexico in accordance with that policy of conservation and it will be continued. We will produce or buy oil in areas, whether in the United States or elsewhere, that allow of advantageous operation.

Smackover Operations

"We are running out of Smackover 30,000 bbls. of oil every day because that situation developed favorably for us. We acquired an interest in Smackover properties through the purchase on April 1 last, of the British Mexican Petroleum Co., which owned the Crusader Pipe Line Co. and other properties in that feld. The name of the Crusader was later changed to Southern Pipe Line Co. This Smackover oil is being refined at our Destrehan plant, near New Orleans.

"We are producing 80,000 bbls. of oil a day in Mexico which is being run through our plant at Tampico, and the company is handling 30,000 bbls. a day at its California refineries. This makes a total of 140,000 bbls. of oil a day now being handled.

"I believe our large land holdings in the northern oil fields of Mexico will be found productive in numerous places, judging from surface indications, and I expect them to yield oil for a great many years. The Ebano property, an area of 1,000,000 acres, 750,000 of which are owned in fee, warrants a great deal of development. In the southern fields we have pinched in wells in accordance with our plans."

Cash Increases

It is understood that as of March 31, last, Pan-American Petroleum & Transport Co.'s owned and controlled companies had $19,000,000 cash. This compared with $14,102,000 as of December 31, 1924. As of March 31, net assets showed an increase of $9,000,000 since December 31.

New refinery methods which have been put into effect since Standard Oil Co. of Indiana took over the operation of the properties are resulting in considerable saving. One of the new methods eliminates steam stilling, and another eliminates sulphur.

CALIFORNIA MARKET STILL SATISFACTORY

LOS ANGELES, Cal., Aug. 1.—During the past week the crude production of the Los Angeles Basin reached a new high mark for the year. This is due to the rapid increase in the Inglewood Field which now has the largest production in the State. Two of the last wells brought in are among the heaviest producers in th field and one of these is flowing 27.9 gravity oil, the highest gravity yet obtained in Inglewood. These facts add to the nervousness with which this field has been observed.

The fuel oil and heavy distillate market continues very weak. Large volumes of oil have already been going into storage every month. The big thing locally is for Inglewood to reach its peak quickly and then decline rapidly, otherwise the California market must weaken. The Standard Oil Co. is now shutting in as much heavy production as possible.

Gasoline consumption on the Pacific Coast is excellent. The local demand is very heavy and is expected to continue so during all of August and most of September as in previous years. Statistics indicate that shipments of gasoline for July to Atlantic and Gulf ports will exceed the record set up in June this year. Advance orders assure a continuation of this heavy shipping for two months at least. The peak of prices for local gasoline intended for use on the Atlantic Seaboard has passed. The recent drop in gasoline prices in the East necessarily makes itself felt on the California market. Though not as strong as last week, the local gasoline market on the whole remains satisfactory.

Lubricating oils continue to move in large volumes, prices remaining firm.

ADDITIONAL REBATES IN QUANTITY SCALE

CHICAGO, Ill., Aug. 3.—Gasoline prices received further jolts the past two weeks when the Standard Oil Co. of Indiana announced additional rebates in its new quantity discount scale. The latest change was on July 28, when the company increased the amount of rebate on purchases over 10,000 gallons a month to 2 cents a gallon. Previously only 1½ cents rebate was given on any purchase over 6,000 gallons.

The first change was effective July 24, when the company reduced the amount of purchase required to obtain discounts from 1,000 to 750 gallons monthly. The change July 28 also included the provision that if the yearly purchase is equal to 12 times the monthly agreed purchases of 10,000 gallons, the discount will be paid on the entire quantity less any monthly payments.

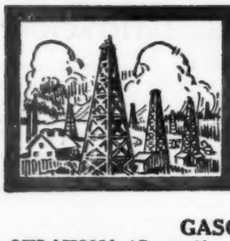
OIL CITY REFINERIES REPORT A SLOW WEEK

OIL CITY, Pa., Aug. 1.—The past week has been very slow in the Pennsylvania refinery circles. With the exception of wax and those products which go into the making of Pennsylvania motor oils, the entire list was weak.

Gasoline was considerably affected by the competition offered by the Atlantic Coast refineries and their lowered quotations. Actual consumption continues at a big figure but the drain on the refineries is not in the same proportion. Kerosene failed to reflect the improvement shown in the west and fuel oils were also weak.

NEW LAW ON LUBRICANTS

LOS ANGELES, Calif., Aug. 2.—California's new law regulating the sale of lubricating oils went into effect the past week. The law requires that the containers of all lubricating oils sold must show the brand of oil or else be labeled "Lubricating Oil—No Brand." Violation of the new law is considered a misdemeanor and is punishable by a fine of not less than $50 or more than $300, or imprisonment in the county jail of not less than 20 days or more than 90 days.



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Aug. 4		July 28		July 21	
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.10¾	.11	.11¼	.11½	.11½	.12
56-58 450 end point	.11	.11¼	.11⅜		.12⅛	.12¼
58-60 437 end point (U. S. Motor)	.11½	.11⅜	.12⅛		.12½	.12⅝
60-62 400 end point	.13	.13¼	.13½	.13⅝	.14	.14½
64-66 end point	.14	.14¼	.14½	.14⅝	.14⅝	.15¼
68-70 350 end point	.15¼	.15½	.15½	.15⅝	.15½	.15⅝
KANSAS—						
58-60 437 end point (U. S. Motor)	.12	.12¼	.12½	.12⅝	.12⅝	.13
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.10⅜	.11	.11	.11¼	.11¼	.11½
50-52 440 end point (Naphtha)	.10⅜	.11	.11⅜		.12⅜	.12½
56-58 450 end point	.11¼	.11½	.11⅝		.12⅜	.12½
58-60 437 end point (U. S. Motor)	.11½	.12	.12¼		.12½	.12⅝
60-62 400 end point	.13	.13¼	.13¼	.13½	.13⅝	.14¼
64-66 390 end point	.14	.14¼	.14¼	.14½	.14⅝	.15
64-66 375 end point	.14¼	.14½	.14⅝	.15	.15	
68-70 360 end point	.15¼	.15½	.15½	.15⅝	.15½	.16
NORTH LOUISIANA—						
56-58 450 end point	.11½	.11⅝	.12¼	.12½	.12½	.12⅝
58-60 437 end point (U. S. Motor)	.12¼		.12½	.12⅝	.12⅝	.13
60-62 400 end point	.13½	.13⅝	.13⅝	.14	.14	.14¼
64-66 375 end point	.14½	.14⅝	.14⅝		.15	
64-66 375 end point	.15½	.15⅝	.15⅝	.16	.15⅝	.16
ARKANSAS—						
58-60 450 end point	.12	.12¼	.12½	.12⅝	.13	.13¼
58-60 437 end point (U. S. Motor)	.12¼	.12½	.12⅝	.13	.13¼	.13½
64-66 375 end point	.14½	.14⅝	.15¼	.15½	.15⅝	.16
ROCKY MOUNTAIN STATES—						
*58-60 43 7end point (U. S. Motor)	.15	.15¼	.15¼	.15½	.15½	.15⅝
PENNSYLVANIA—						
52 Naphtha	.14½	.14⅝	.14½	.14⅝	.14½	.14⅝
54 Naphtha	.14⅝	.15	.14⅝	.15	.14⅝	.15
56 Gasoline	.15	.15¼	.15	.15¼	.15	.15⅛
58 Gasoline	.15¼	.15½	.15¼	.15½	.15½	.16
60 Gasoline	.16	.16¼	.16	.16¼	.16	.16¼
62 Gasoline	.16½	.16⅜	.16½	.16⅜	.16½	.16⅝
64 Gasoline	.17¼	.17½	.17¼	.17½	.17¼	.17½
66 Gasoline	.17¼	.17½	.17¼	.17½	.17¼	.17½
68-70 Gasoline	.20	.20¼	.20	.20¼	.20	.20¼
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.11	.11½	.11	.11½	.11	.11½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.11¼	.11½	.11½	.11⅜	.11⅜	.12
56-58 450 end point	.11½		.12		.12⅜	.12⅛
68-60 437 end point (U. S. Motor)	.12		.12½		.12⅝	.12⅝
60-62 400 end point	.13¼	.13½	.13⅜	.14	.14	.14¼
64-66 375 end point	.14½	.14⅜	.14⅜	.15	.15¼	.15½
68-70 360 end point	.15¼	.15½	.15½	.15⅝	.15⅜	.16

NATURAL GASOLINE

	Aug. 4		July 28		July 21	
OKLAHOMA (Group 3)—						
⌈Grade Double A, 80-87.9, 375 e.p., rec. 90%	.13½	.13¾	.14		.14½	
⌊Grade A, 72-79.9, 375 end point, rec. 90%	.13½	.13¾	.14		.14½	
⌈Grade Double B, 84-92, 375 e.p., rec. 85%	.13½	.13¾	.14		.14½	
⌊Grade B, 76-83.9, 375 end point, rec. 85%	.13½	.13¾	.14		.14½	
Grade C, 80-90, 375 end point, rec. 78%..	.13½	.13¾	.14		.14½	
NORTH TEXAS—						
⌈Grade Double A, 80-87.9, 375 e.p., rec. 90%	.13¾		.14		.14¼	.14½
⌊Grade A, 72-79.9, 375 end point, rec. 90%	.13¾		.14		.14¼	.14½
⌈Grade Double B, 84-92, 375 e.p., rec. 85%	.13¾		.14		.14¼	.14½
⌊Grade B, 76-83.9, 375 end point, rec. 85%	.13¾		.14		.14¼	.14½
Grade C, 80-90, 375 end point, rec. 78%..	.13¾		.14		.14¼	.14½
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 end point, rec. 90%..	.14¼	.14½	.14¾	.15	.15	.15¼
Grade B, 76-83.9, 375 end point, rec. 85%..	.14¼	.14½	.14¾	.15	.15	.15¼
Grade C, 80-90, 375 end point, rec. 78%...	.14¼	.14½	.14¾	.15	.15	.15¼
CALIFORNIA—						
78-85 absorption, 360-390 end point	.13¼	.13¾	.13¼	.13¾	.13¼	.13¾
78-84 compression, 350 end point	.13½		.13½		.13½	
CHICAGO DIST. (Based on Group 3)—						
⌈Grade Double A, 80-87.9, 375 e.p., rec. 90%	.13¾	.14	.14	.14¼	.14½	
⌊Grade A, 72-79.9, 375 end point, rec. 90%	.13¾	.14	.14	.14¼	.14½	
⌈Grade Double B, 84-92, 375 e.p., rec. 85%	.13¾	.14	.14	.14¼	.14½	
⌊Grade B, 76-83.9, 375 end point, rec. 85%	.13¾	.14	.14	.14¼	.14½	
Grade C, 80-90, 375 end ponit, rec. 78%..	.13¾	.14	.14		.14¼	.14½

MOTOR NATURAL GASOLINE (BLENDS)

	Aug. 4		July 28		July 21	
OKLAHOMA (Group 3)—						
60-62 450 end point	.12	.12¼	.12	.12¼	.12¼	.12½
68-70 430-435 end point	.12¾	.13	.12¾	.13	.13	
NORTH TEXAS—						
58-60 450 end point	.12	.12¼	.12	.12¼	.12¼	.12½
PENNSYLVANIA—						
*60-62	.15¾		.16	.16¼	.16	.16¼
*64-66	.15¾		.16	.16¼	.16	.16¼
*66-68	.15¾		.16	.16¼	.16	.16¼
*68-70	.15¾		.16	.16¼	.16	.16¼
CHICAGO DIST. (Based on Group 3)—						
60-62 450 end point	.12	.12½	.12	.12¼	.12¾	.13
68-70 437 end point	.12¾	.13	.13		.13	.13¼

*At Sistersville, W. Va.

BURNING OIL

	Aug. 4		July 28		July 21	
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04⅛	.04	.04⅛	.03⅞	.04⅛
42-44 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
40-41 prime white Kerosene	.03¾	.03⅞	.03¾	.03⅞	.03¾	.03⅞
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04½	.04¾	.04½	.04¾	.04½	.04¾
42-44 water white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07	.07⅛	.07	.07⅛	.06⅞	.07⅛
NORTH TEXAS—						
41-43 water white Kerosene	.03⅞	.04	.04	.04⅛	.04	.04⅛
40-42 prime white Kerosene	.03¾	.04	.03¾	.04	.03¾	.03⅞
41-43 prime white Kerosene	.03¾	.04	.03¾	.04	.03¾	.03⅞
42-44 water white Kerosene	.04⅛	.04¼	.04¼	.04½	.04¼	.04½
ARKANSAS—						
41-43 water white Kerosene	.04½	.04¾	.04½	.04½	.04½	.04¾
42-44 water white Kerosene	.04¾	.05	.04½	.04¾	.04¾	.05
PENNSYLVANIA—						
43 Kerosene prime white	.06	.06¼	.06	.06¼	.06	.06¼
45 Kerosene water white	.06¼	.06½	.06¼	.06½	.06¼	.06½
46 Kerosene water white	.06½	.06¾	.06½	.06¾	.06½	.06¾
47 Kerosene water white	.06¾	.07	.06¾	.07	.06¾	.07
34 Neutral	.07	.07¼	.07	.07¼	.07	.07¼
34 Sundebloomed Neutral	.08½	.09	.08½	.09	.08½	.09
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.07¼	.07½	.07¼	.07½	.07½	.07¾
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08½	.09	.08½	.09	.08½	.09
Engine distillate, 42-44 480 end point	.07¾	.08	.07¾	.08	.07¾	.08
CHICAGO DIST. (Based on Group 3)—						
41-42 water white Kerosene	.04	.04¼	.04	.04¼	.04	.04⅛
42-44 water white Kerosene	.04⅜	.04⅝	.04¼	.04½	.04¼	.04½

*Colorado points.

FUEL OILS

	Aug. 4		July 28		July 21	
KANSAS—						
24-26 Fuel Oil	1.10	1.10	1.00	1.05	.95	1.00
32-36 Gas Oil	.03¼	.03½	.03¼	.03½	.03	.03⅛
38-40 Distillate	.03½	.03⅝	.03½		.03⅜	.03½
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.00	1.05	.97½	1.00	.90	
22-26 Fuel Oil (sellers' cars)	1.05		.97½	1.00	.90	
24-26 Fuel Oil (buyers cars)	1.07½	.10	1.00		.90	
24-26 Fuel Oil (sellers' cars.	1.07½	1.10	1.00		.95½	.95
28-30 Fuel Oil (sellers' cars)	1.12½	1.15	1.05	1.10	.97½	1.00
32-36 Gas Oil	.03⅛	.03¼	.03⅛	.03¼	.02⅞	.03
36-38 Distillate	.03⅜	.03½	.03¼	.03½	.03⅛	.03¼
38-40 Straw Distillate	.03½	.03⅝	.03½		.03¼	.03½
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	110		1.00	1.05	.95	1.00
26-30 Fuel Oil	1.10	1.15	1.10		1.00	1.02½
32-36 Gas Oil	.03⅛	.03¼	.03⅛	.03¼	.02¾	.03
36-38 Distillate	.03¼	.03½	.03¼	.03½	.03⅛	.03¼
38-40 Straw Distillate	.03½	.03⅝	.03½		.03¼	.03½
NORTH LOUISIANA—						
18-20 Fuel Oil	1.05		1.05		1.00	1.05
32-36 Gas Oil	.03¼	.03½	.03¼	.03½	.03¼	.03½
ARKANSAS—						
38-40 Distillate	.03¾		.03¾		.03¼	.03⅜
32-36 Gas Oil	.03⅜	.03½	.03⅜	.03½	.03	.03¼
22-26 Refinery Fuel Oil	1.00	1.05	1.00		.90	.95
GULF COAST (South Texas)—						
Gas Oil	.05	.05¾	.05¼	.06	.05¼	.06
Fuel Oil	1.50	1.55	1.50	1.55	1.50	1.55
PENNSYLVANIA—						
30-34 Fuel Oil	.05½	.05¾	.05½	.05¾	.05	.05¼
36-40 Fuel Oil	.06	.06¼	.06	.06¼	.06	.06¼
CALIFORNIA—						
33-36 Distillate	.04¾	.05	.04¾	.05	.04¾	.05
27-33 Distillate	.04	.04½	.04	.04½	.04	.04½
15-20 Fuel Oil (at tide water)	1.50	1.55	1.50	1.55	1.50	1.55
27 plus Diesel Oil	1.75	1.80	1.75	1.80	1.75	1.80
CHICAGO DIST. (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars, Group 3)	1.00	1.05	.97½	1.00	.95	1.97½
18-22 (El Dorado)	.97½	1.00	.95	.97½	.90	.92½
18-20 (Smackover)	1.00	1.05	1.00		.95	1.00
32-36 Gas Oil	.03⅛	.03¼	.03⅛	.03¼	.03	.03⅛
36-38 Distillate	.03⅜	.03½	.03¼	.03½	.03⅛	.03¼
38-40 Straw Distillate	.03½	.03⅝	.03⅜	.03⅝	.03¼	.03½

LUBRICATING OILS AND WAX

	Aug. 4		July 28		July 21	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20-25 cold test	.05¼	.05½	.05¼	.05½	.05¼	.05½
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06	.06¼
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.06	.06¼
150 vis., 3 color, 20-25 cold test	.10½	.11	.10½	.11	.10½	.11
150 vis., 4 color, 20-25 cold test	.10¼	.10¾	.10¼	.10¾	.10¼	.10¾
180 vs., 4 color, 23-28 cold test	.10¼	.11¼	.10¾	.11¼	.10¾	.11
180 vis., 3 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis., 3 color, 23-28 cold test	.12	.12½	.12	.12½	.12	.12½
200 vis., 4 color, 23-28 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼
220 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
220 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 3 color, 25-30 cold test	.16	.16½	.16	.16½	.16	.16½
240 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 3 color, 25-30 cold test	.17½	.18	.17½	.18	.17½	.18
280 vis., 4 color, 25-30 cold test	.16¼	.17	.16½	.17	.16½	.17
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
180 vis., 6 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
200 vis., 5 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vs., 6 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis., 5 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
220 vis., 6 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
240 vis., 5 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
240 vis., 6 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
280 vis., 5 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Cylinder Stocks—						
180-200 vis., S. R. green, 40-45 cold test	.09	.09½	.09	.09½	.09	.09½
190-200 vis., S. R. green, 40-45 cold test	.08	.08½	.08	.08½	.08	.08½

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

170-190 dark green, 40-45 cold test	.06½	.07	.06½	.07	.06½	.07
190-200 vis. @ 210 "D" Bright Stock	.36		.36		.36	
200-210 vis. @ 210 "E" Bright Stock	.31		.31		.31	
150 vis. @ 210 "D" Bright Stock	.32		.32		.32	
150 vis. @ 210 "E" Bright Stock	.28		.28		.28	
Waxes:						
124-126 White Crude Scale Wax	.05	.05½	.05	.05¼	.05	.05½
PENNSYLVANIA—						
150, 3 color	.19¾		.19¾		.18½	
180, 3 color	.22½		.22½		.22	
200, 3 color	.24½		.24½		.24	
220, 3 color	.26½		.26½		.26	
600, steam refined	.19½		.19½		.18	
635, steam refined	.23		.23		.22	
650, steam refined	.24½		.24½		.23½	
600, Pennsylvania flash	.29		.29		.28	
630, Pennsylvania flash	.38		.38		.37	
*550, E filtered	.22		.22		.22½	
*600, E filtered	.23½		.23½		.23½	
660, E filtered	.23		.23		.22½	
600, D filtered	.29		.29		.28½	
550, E filtered	.21½		.21½		.21	
550, D filtered	.25		.25		.24	
Pennsylvania Bright Stock	.39		.39		.39	
122-124 White Crude Scale Wax	.05½		.05½		.05⅝	
†124-126 White Crude Scale Wax	.05⅝		.05⅝		.05½	

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.09½	.10½	.09½	.10½	.08½	.09
No. 2 color, 150 vis., pale oil	.11	.12	.11	.12	.11½	.12
No. 3 color, 200 vis., pale oil	.13½	.14	.14	.15	.13½	.14
No. 3 color, 300 vis., pale oil	.15½	.16	.16	.17	.15½	.16
No. 3½ color, 500 vis., pale oil	.17	.17½	.18	.19	.17½	.19
No. 3½ color, 750 vis., pale oil	.23½	.24½	.23½	.24½	.22½	.23
No. 4½ color, 1200 vis., pale oil	.26½	.27½	.26½	.27½	.25	.25½
No. 4 color, 2000 vis., pale oil	.30	.31	.30	.31	.28	.29
No. 2 plus color, 150 vis., pale filtered	.22½		.22½		.22½	
No. 2 plus color, 200 vis., pale filtered	.24		.24		.24	
No. 2½ minus color, 300 vis., pale filtered	.27½		.27½		.27½	
No. 2½ color, 500 vis., pale filtered	.31½		.31½		.31½	
No. 2½ color, 800 vis., filtered	.41½		.41½		.41½	
No. 5 to 6 color, 200 vis., red oil	.11½	.12	.12½	.13½	.12	.12½
No. 5 to 6 color, 300 vis., red oil	.13½	.14	.14½	.15½	.14	.14½
No. 5 to 6 color, 500 vis., red oil	.15	.15½	.16½	.17½	.15½	.16
No. 5 to 6 color, 750 vis., red oil	.20	.20½	.21½	.22½	.21	.21½
CALIFORNIA—						
130 pale, 2½-3 color	.12	.12½	.12	.12½	.12	.12½
200 vis., 2½-3 color	.15½	.16	.15½	.16	.15½	.16
300 vis., 3 -3½ color	.17	.17½	.17	.17½	.17	.17½
350 vis., 3½-4 color	.18½	.19	.18½	.19	.18½	.19
400 vis., 3½-4 color	.20	.20½	.20	.20½	.20	.20½
Red Neutrals:						
200 vis., 4½-5 color	.14	.14½	.14	.14½	.14	.14½
300 vis., 5 -6 color	.15	.15½	.15	.15½	.15	.15½
400 vis., 5 -6 color	.17	.17½	.17	.17½	.17	.17½
500 vis., 4½-5 color	.20	.21	.20	.21	.20	.21
500 vis., 6 -6½ color	.18	.19	.18	.19	.18	.19
600 vs., 6½ plus color	.19	.19½	.19	.19½	.19	.19½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK DOMESTIC MARKET

Bayonne Refinery Prices:	Aug. 4	July 28	July 21
U. S. Motor Gasoline, 58-60 437	.16½	.16½	.16½
*Bunker Oil, 14-16 Be.	1.75	1.75	1.75
Diesel Oil, 28-30 Be.	2.30	2.30	2.30
Furnace Oil. New York City	.10	.10	.10
Gas Oil, 32-36 Be.	.06¾	.06¾	.06¾
41-43 Kerosene prime white	.06¼	.06¼	.06¼

*Lighterage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

Motor Gasoline:	Aug. 4	July 28	July 21
58-60 Be. gravity, in cases	.30.65	.30.65	.30.65
U. S. Navy, in bulk	.16½	.16½	.16½
Naphtha:			
60° F., 59-61 Be. gravity, in bulk	.19¼	.19¼	.19¼
60° F., 62-63 Be. gravity, in bulk	.20½	.20½	.20½
60° F., 66-68 Be. gravity, in bulk	.22	.22	.22
Kerosene:			
Standard white, 40-42 Be. grav., in bulk	.06	.06	.06
Standard white, 40-42 Be. grav., in barrels	.13	.13	.13
Standard white, 40-42 Be. grav., in cases	.16.4	.16.4	.16.4
Water white, 42-44 Be. grav., in bulk	.07	.07	.07
Water white, 42-44 Be. grav., in barrels	.14	.14	.14
Water white, 42-44 Be. grav., in cases	.17.4	.17.4	.17.4
†Lubricating Oils (in bulk):			
Cylinder Stock, extra filtered, 600, barrels	.36	.36	.36
Cylinder Stock, light filtered, 600, barrels	.31	.31	.31
No. 1 white Neutral, .878 spec. grav.	.36	.36	.36
No. 5 Bright Stock, .897 spec. grav.	.40	.40	.40
Special "A" red oil, .897 spec. grav., 170 vis.	.12	.12	.12
No. 2 red oil, .903 spec. grav., 212 vis.	.13	.13	.13
No. 1 red oil, .905 spec. grav., 265 vis.	.14	.14	.14
Polar red oil, .903 spec. grav., 295 vis.	.15	.15	.15
Pale oil, "25" .899 spec. grav.	.13½	.13½	.13½
Pale oil, "28" spec. grav.	.09	.09	.09
Paraffin Wax:			
120-122 a.m.p., per lb.	.06½	.06	.06
125-127 a.m.p., per lb.	.06¾	.06¾	.06¾
130-132 a.m.p., per lb.	.06⅞	.06⅞	.06⅞
135-137 a.m.p., per lb.	.07½	.07½	.07½

Petrolatum, in bbls., car load lots, per lb.:			
Amber	.03¼	.03	.03¼
Light amber	.03¾	.03¾	.03¾
Cream	.06	.06	.06

†All lub prices in barrels.

LOS ANGELES EXPORT PRICES

	Aug. 4		July 28		July 21	
Kerosene water white	.05½	.06	.05½	.06	.05½	.06
U. S. Motor Gasoline, 54-56 437 end point	.10¾	.11½	.10¾	.11½	.10¾	.11½

CRUDE OIL PRICES

Arkansas and North Louisiana	
Caddo, 38° and above	$2.20
35° to 37.9°	2.10
32° to 34.9°	2.00
Below 32°	1.85
Homer, 35° and above	1.95
32° to 34.9°	1.85
31° to 32.9°	1.75
Below 31°	1.60
Haynesville, 33° and above	1.85
Below 33°	1.75
El Dorado, 33° and above	1.85
Below 33°	1.75
Bull Bayou, 38° and above	2.00
35° to 37.9°	1.85
32° to 34.9°	1.70
Cotton Valley	1.10
De Soto	2.05
Crichton	1.85
Bellevue	1.90
*Stephens, Ark:	
Below 26°	1.35
26° and above	1.55

*Posted by Atlantic Oil Producing Co.

Smackover:	
(Standard Oil Co. of Louisiana)	
Below 24°	.85
24° to 24.9°	1.15
25° to 25.9°	1.25
26° to 26.9°	1.30
27° and above	1.35
(Posted by The Texas Co.)	
Below 24°	.85
24° to 25°9	1.05
26° and above	1.35
(Atlantic Oil Producing Co.)	
Below 23°	.90
23° to 23°9	.95
Wyoming and Montana	
Rock Creek (Wyo.)	2.00
Salt Creek	1.60
Big Muddy	2.00
Mule Creek	1.50
Grass Creek (light)	2.15
Elk Basin	2.15
Lance Creek	2.15
Osage	2.15
Cat Creek (Mont.)	2.15
Sunburst (Mont.)	1.55
Lost Soldier	1.35
Greybull and Torchlight	2.00
Hamilton Dome	1.60
Hogback, N. Mex.	2.20
Artesia (N. Mex.)	1.70

Lost Soldier and Lander based on contracts.

Oklahoma, Kansas, North and East Central Texas	
Prairie Oil & Gas Co. and other major purchasing companies, except as noted:	
28° to 28.9°	1.40
29° to 29.9°	1.48
30° to 30.9°	1.56
31° to 31.9°	1.64
32° to 32.9°	1.72
33° to 33.9°	1.80
34° to 34.9°	1.88
35° to 35.9°	1.96
36° to 36.9°	2.04
37° to 37.9°	2.12
38° to 38.9°	2.20
39° to 39.9°	2.32
40° to 40.9°	2.36
41° to 41.9°	2.44
42° to 42.9°	2.52
43° to 43.9°	2.60
44° to 44.9°	2.68
Magnolia Petroleum Co.—	
Below 28°	1.00
28° to 30.9°	1.35
Gypsy Oil Co.—	
Bristow, Glenn Pool, Morris and Perryman:	
25° to 25.9°	1.16
26° to 26.9°	1.24
27° to 27.9°	1.32
California	
14° to 19.9°	1.25
20° to 20.9°	1.27
21° to 21.9°	1.30
22° to 22.9°	1.33
23° to 23.9°	1.36
24° to 24.9°	1.40
25° to 25.9°	1.44
26° to 26.9°	1.48
27° to 27.9	1.52
28° to 28.9°	1.56
29° to 29.9°	1.60
30° to 30.9°	1.64
31° to 31.9°	1.68
32° to 32.9°	1.72
33° to 33.9°	1.76
34° to 34.9°	1.80
35° and above	1.85
Rosecrans-Athens Field only:	
Below 35.9° gravity, same as other fields.	
36° to 36.9°	1.92
37° to 37.9°	2.00
38° to 38.9°	2.08
39° to 39.9°	2.16
40° to 40.9°	2.24
41° to 41.9°	2.32
42° and above	2.40
Gulf Coast	
Grade A	1.50
Grade B	1.25
Luling (Magnolia)	1.40
Laredo (Magnolia Petroleum Co.)	.85
Lockhart (Magnolia)	2.25
Rockdale-Minerva (Milam County)	1.25
Calliham (Live Oak-McMullen)	2.05
Webb, Jim Hogg, Zapata	1.15
*High Island	1.20

*Posted by Sun Oil Co.

*Somerset	
Below 30°	1.25
30° to 32.9°	1.35
33° to 35.9°	1.80
36° to 38.9°	1.95
39° to 41.9°	2.10
42° and above	2.35

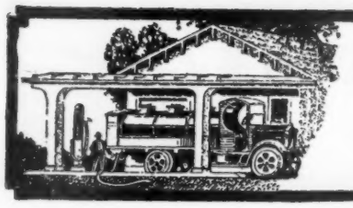
*Posted by Grayburg Oil Co.

Eastern States	
Penna Grade Oil in New York Transit Lines	3.90
Bradford District Oil in National Transit Lines	3.90
Penna Grade Oil in National Transit Lines	3.80
Penna Grade Oil in Southwest Pa. Pipe Lines	3.80
Penna Grade Oil in Eureka Pipe Line Lines	3.75
Penna Grade Oil in Buckeye Pipe Lines	3.75
Cabell Grade Oil in Eureka Pipe Line Lines	2.35
Corning Grade Oil in Buckeye Pipe Line Lines	2.05
Somerset Medium Oil in Cumberland Pipe Line Lines	2.45
Somerset Light Oil in Cumberland Pipe Line Lines	2.60
Ragland Grade Oil in Comberland Pipe Line Lines	1.30
Gaines	3.45
Lima	2.33
Wooster	2.35
Illinois	2.12
Indiana	2.13
Princeton	2.12
Plymouth	1.65
Waterloo	1.10
Oil Springs, Canada	2.80
Petrolia, Canada	2.73
*Western Kentucky, 36° and above	2.15
*Western Kentucky, 33° to 35.9°	2.05
*Western Kentucky 32.9° and below	1.95
Cumberland, Barren and Monroe Counties (Kentucky), (Paragon Development Co.)	2.60

*Prices for Warren, Allen, Hancock, Simpson and Ohio Counties by Indian Refining Co.

Mexican Crude	
*Tuxpam (f.o.b. Mexican ports)	1.45
†Panuco (f.o.b. Mexican ports)	1.25
Tuxpam (New York)	2.00
Panuco (New York)	1.67

*Plus 33.00c tax. †20.00c tax.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns August 4.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Chicago Dist.—				
†100 gals. or more	18.0	20.0	...	12.0

Tank wagon prices on April 19, 1922; g. up 1½ c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c; k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c, k. up 1c; April 19, g. down 1c; July 14, g. up 1c.

Decatur, Ill.	13.0	15.0	...	12.5
East St. Louis	18.1	20.35	...	11.6
Joliet	19.4	21.4	...	12.7
Peoria	14.0	16.0	...	12.5
Quincy	19.2	21.2	...	12.3
Davenport, Ia.	21.5	23.5	2.0	12.9
Des Moines	19.5	21.5	2.0	12.9
Keokuk	21.5	23.5	2.0	12.9
Sioux City	21.0	23.0	2.0	12.5
Duluth, Minn.	22.5	24.5	2.0	13.6
Minneapolis	22.2	24.2	2.0	13.6
La Crosse, Wis.	22.2	24.2	2.0	13.4
Milwaukee	21.1	23.1	2.0	12.3
Madison	21.3	23.3	2.0	12.5
Detroit, Mich.	21.8	23.8	2.0	13.2
Grand Rapids	21.7	23.7	2.0	13.1
Saginaw	21.9	23.9	2.0	13.3
Evansville, Ind.	22.0	24.0	3.0	12.5
Fort Wayne	22.4	24.4	3.0	12.9
Indianapolis	22.2	24.2	3.0	12.7
South Bend	22.4	24.4	3.0	12.9
Fargo, N. D.	21.9	23.9	1.0	15.6
Huron, S. D.	23.0	25.0	3.0	14.1
Sioux Falls	21.5	23.5	3.0	13.6
*Kansas City Mo	21.9	23.9	3.0	11.3
*Springfield	21.8	23.8	3.0	12.2
*St. Louis	20.6	22.9	2.5	12.0
*St. Joseph	21.0	23.0	2.5	11.9
Wichita, Kans	20.8	22.8	2.0	11.8
Bartlesville, Okla	20.9	22.9	3.0	10.9

*State tax is 2c. Remainder is city tax.
†Tank wagon price on less than 100 gallons, 19.0c.

The following monthly rebate system is effective on tank wagon schedules throughout the territory of the Standard Oil Co. of Indiana: Over 750 gallons, ½ cent; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1½ cents; over 10,000 gallons, 2 cents. If quantity bought during year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 3,600 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Newark, N. J.	19.0	21.0	...	12.5
Atlantic City	19.0	....	...	12.5
Annapolis Md.	22.0	....	2.0	12.0
Baltimore	21.0	23.0	2.0	11.0
Cumberland	22.0	24.0	2.0	12.0
Washington, D. C.	21.0	23.0	2.0	12.0
Norfolk, Va.	23.0	25.0	3.0	13.0
Petersburg	23.0	....	3.0	13.0
Danville	23.0	....	3.0	13.6
Richmond	23.0	25.0	3.0	13.0
Roanoke	23.0	25.0	3.0	13.0
Keyser, W. Va.	23.5	....	3.5	13.0
Charleston	22.5	23.0	3.5	13.0
Parkersburg	22.5	23.0	3.5	13.0
Wheeling	22.5	23.0	3.5	13.0
Charlotte, N. C.	25.0	26.0	4.0	14.0
Hickory	24.0	....	4.0	14.0
Mt. Airy	24.0	....	4.0	14.0
Salisbury	24.0	....	4.0	14.0
Charleston, S. C.	25.5	27.5	5.0	14.5
Columbia	25.5	27.5	5.0	14.5

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Atlanta, Ga.	24.0	27.0	3.0	13.0
Augusta	24.0	27.0	3.0	15.0
Macon	24.0	27.0	3.0	13.5
Savannah	22.0	25.0	3.0	13.0
Birmingham Ala.	22.0	25.0	2.0	14.5
Mobile	21.0	24.0	2.0	11.0
*Montgomery	23.0	26.0	3.0	15.5
Clarksdale, Miss.	22.0	25.0	3.0	12.0
Jackson	22.0	25.0	3.0	9.0
Natchez	21.5	24.5	3.0	11.5
Vicksburg	21.5	24.5	3.0	11.5
Jacksonville, Fla	23.0	26.0	4.0	13.0
Miami	25.0	28.0	4.0	14.5
Pensacola	23.0	26.0	4.0	13.5
Tampa	23.0	26.0	4.0	13.0
Lexington, Ky.	18.0	21.0	3.0	14.0
Covington	21.0	24.0	3.0	14.0
Louisville	22.0	25.0	3.0	12.0

*In addition to the State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
*Pittsburgh, Pa.	21.0	26.0	...	14.0
*Philadelphia	21.0	26.0	...	14.0
*Scranton	21.0	26.0	...	14.0
*Allentown	21.0	26.0	...	14.0
Altoona	21.0	26.0	...	14.0
*Erie	21.0	26.0	...	14.0
Dover, Del.	23.0	26.0	2.0	14.0
Wilmington	23.0	26.0	2.0	14.0
Springfield, Mass	21.0	24.0	...	13.0
Worcester, Mass.	22.0	26.0	...	13.0
Boston	22.0	26.0	...	12.0
Providence, R. I.	23.0	27.0	1.0	13.0
Hartford, Conn.	22.0	26.0	1.0	12.0
New Haven, Conn.	23.0	27.0	1.0	13.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Dallas, Tex.	19.0	22.0	1.0	12.0
Fort Worth	16.0	18.0	1.0	10.0
Houston	19.0	23.0	1.0	12.0
San Antonio	19.0	22.0	1.0	12.0
El Paso	20.0	22.0	1.0	13.0
Muskogee, Okla.	21.0	24.0	3.0	11.0
Oklahoma City	18.6	21.6	3.0	11.0
Tulsa	21.0	24.0	3.0	11.0
Ft. Smith, Ark.	23.0	26.0	4.0	12.0
Little Rock	23.0	25.0	4.0	10.0
Texarkana	20.0	23.0	1.0	12.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Casper, Wyo.	22.5	24.5	2.5	13.0
Cheyenne	24.0	26.0	2.5	14.5
Albuquerque, N. Mex.	26.5	29.5	3.0	16.5
Salt Lake, Utah.	25.0	27.0	3.5	18.0
Denver, Colo.	22.0	24.0	2.0	14.5
Pueblo	22.0	24.0	2.0	14.5
Butte, Mont.	24.0	24.0	2.0	16.0
Helana	26.0	28.0	2.0	17.0
Boise, Idaho	24.5	26.5	3.0	20.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Albany, N. Y.	22.0	....	...	13.0
*New York	22.0	....	...	13.0
Buffalo	22.0	....	...	12.0
Rochester	22.0	....	...	12.0
Syracuse	22.0	....	...	12.0
Boston, Mass.	22.0	....	...	13.0
Providence, R. I.	22.0	....	...	13.0
Augusta, Me.	23.0	....	1.0	13.0
Manchester, N. H.	24.0	....	2.0	13.0
Burlington, Vt.	24.0	....	2.0	13.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
*New Orleans	16.5	18.5	3.0	10.0
Alexandria	19.0	20.5	2.0	11.0
Baton Rouge	19.0	21.0	2.0	9.5
LaFayette	20.0	22.0	2.0	10.5
Lake Charles	20.5	22.5	2.0	11.0
Shreveport	20.5	22.5	2.0	11.0
Memphis, Tenn.	19.0	21.0	3.0	12.0
Chattanooga	22.5	24.5	3.0	12.5
Knoxville	23.5	25.5	3.0	13.0
Nashville	20.5	22.5	3.0	12.5
Bristol	23.0	25.0	3.0	12.5
Little Rock, Ark.	23.0	25.0	4.0	10.0

*Tax of 3 cents includes city tax of 1 cent.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
San Francisco	17.0	20.0	2.0	15.5
Los Angeles	15.5	18.5	2.0	15.5
Fresno	17.5	20.5	2.0	19.5
Reno, Nev.	22.5	25.5	4.0	19.0
Portland, Ore.	18.0	21.0	3.0	16.5
Seattle, Wash.	17.0	20.0	2.0	16.5
Tacoma	17.0	20.0	2.0	16.5
Spokane	21.0	24.0	2.0	20.5
Phoenix, Ariz.	23.0	26.0	3.0	21.5

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
All Ohio points	20.5	22.5	2.0	13.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Omaha	21.25	21.5	2.0	12.5
Crawford	22.0	....	2.0	13.25
McCook	22.75	24.75	2.0	14.0
Norfolk	21.75	23.75	2.0	13.0
North Platte	22.75	24.75	2.0	13.75
Scotts Bluff	22.25	24.25	2.0	13.25

TANK WAGON PRICE CHANGES

July 28.—Standard Oil Co. of Indiana reduced the tank wagon and service stations price of gasoline 5 cents at Peoria, Ill., and 2 cents at Des Moines.

July 29.—The Standard Oil Co. of Indiana reduced the tank wagon and service station price of gasoline 1 cent at Sioux Falls, S. D.

August 1.—Magnolia Petroleum Co. reduced the tank wagon price of gasoline 1 cent and the service station price 2 cents at Fort Worth.

CRUDE PRICE CHANGES

August 3.—Gulf Production Co. reduced the price of Grade A and Grade B Gulf Coastal crude 25 cents,. The reduction was met by other purchasers.

OKLAHOMA REFINED SITUATION UNCHANGED

(Continued from Page 20)

Nevertheless, there is a strong confidence in the fuel oil situation in most quarters. One refiner reported that although he had 150,000 bbls. of fuel oil in storage and was running more, he believed prices would climb to new heights and he was not going to dispose of a drop until he got his price. The same refiner reported selling a quantity of fuel over August for $1.26½ a barrel, although the present spot market is considerably below that mark.

At the bottom of it all, the strength of fuel oil seems to lie in the fact that higher prices naturally will come with the usual increased fall and winter demand and that refiners presumably are able to store their output until the price justifies its sale.

Gasolines and Naphtha

Except for the sudden action of the Mid-Continent Petroleum Corp. late Tuesday in reducing prices below prevailing market quotations, the gasoline situation was featureless during the past week. All grades of gasoline suffered continued declines with no particular activity in any. Only one grade, the 64-66, 375, seemed to have any resistance at all to bearish influence, this being due largely to the purchase of 1,500,000 to 2,000,000 gallons for export by Sinclair out of Texas. While most of the 64 gasoline in Oklahoma moved for 14¼ cents sales at 14 cents were becoming more frequent. The other higher gravities weakened materially during the week. The 60-62, 390 gasoline held firm at 13¼ cents during the week but it weakened off Monday and by Tuesday could be bought freely at 13 cents. Some 68-70, 350 gasoline was sold, bringing from 15¼ to 15½ cents.

After the Mid-Continent Petroleum Corp. reduction Tuesday afternoon, the market on U. S. Motor gasoline was 11½ to 11¾ cents. While the company was selling freely at the low figure there were some companies still making sales at the higher price. A few cars were sold Tuesday at 12 cents. The 56-58,450 gasoline was quiet during the week, most of the product moving at 11¼ to 11½ cents. However, the grade now is available in quantities at 11 cents. There has been only a little trading in naphtha (50-52,-450) and sellers say they would dispose of their product freely at 10¾ cents.

Natural Gasolines and Blends

Despite the fact that considerable natural gasoline was bought up a week ago, the market failed to benefit and fell off from a half to a quarter of cent during the week. While there seemed to be a steady movement of natural, this was not sufficient even to hold the market steady, and Tuesday all grades of the product were freely available as low as 13½ cents. Because of prices of naturals and naphthas, blended gasolines have become almost an unknown quantity and quotations are more or less nominal. A little 60-62, 450 blend is being made and is being sold around 12 to 12¼ cents.

Kerosene and Distillates

Kerosene markets were able to maintain firmness despite comparative inactivity. Only in the 42-44 grade was there any particular show of life. The 41-42 water white kerosene could be obtained freely at 4 cents, although sales were made at fractions of a cent higher. The 42-44 product moved at 4¼ to 4½ cents but the tendency was toward the higher figure. As has been explained in previous stories, the firmness of kerosene at this time is due almost directly to the tightness of the distillate situation, refiners slowing up on their kerosene cuts to supply distillate demands. Distillates continued to gain strength during the past week with refiners still slow in disposing of the product, which they prefer to store for fall demands. The 38-40 distillate was extremely scarce during the week, enough so that sales at previous high figures of 3½ cents were becoming few. The prevailing quotation seemed to be 3⅝ cents. Some contracts for fall delivery were made during the week at prices ranging from 4 cents up. The 36-38 distillate was scarce at 3¼ cents.

Fuel Oil and Gas Oil

The growing strength of fuel oil has caused less and less discrimination between the various grades so that during the past week very little of any feul under 26 gravity could be obtained under $1.05, including fuel below 22 degress. Very little fuel above 28 gravity is being made and sold but quotations range from $1.12½ to $1.15. Gas oil has been strong in sympathy with fuel oil and distillates. Although some could be bought for 3 cents during the week, 3⅛ cents was the prevailing price.

Lubricants and Wax

The situation so far as lubricating oils and wax is concerned was little changed the past week, as has been the case for the last several weeks. There perhaps was a slight weakening in a few neutrals but cylinder stocks and bright stocks were active. There were no price changes in any grade. Wax continued steady. One sale was made as high as 5½ cents but the bulk moved at 5¼ cents a pound.

ASK RATE REDUCTION

HOUSTON, Tex., Aug. 1.—The State Railroad Commission has been asked to approve a reduction on rates on crude oil proposed by the railroads from the Mirando (Laredo) districts to Gulf Coast ports. The railroads name a tariff of 17½ cents per barrel on crude from Mirando on the Tex-Mex Railroad to Galveston, Texas City, Houston and Nort Arthur. The present rate as 22½ cents per barrel. A tariff of 14½ cents per barrel has been named to San Antonio. Much of the Webb and Jim Hogg County crude now shipped from Mirando City goes in tank cars to Aransas Pass on the Gulf near Corpus Christi and is then barged around to the ports named. The reduction by the railroads has been made to meet this competition.

TOURING MID-CONTINENT

Charles S. Crickmer, of Dallas, Tex., engineer with the Guiberson Corp., is making a tour of the northern fields of the Mid-Continent and making his headquarters in Tulsa while doing so.

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SINCLAIR OILS

Ad No. 10

NUMEROUS FACTORS IN HEAT EXCHANGE

(Continued from Page 122)

aerial type—open coils, almost universally of 2-inch pipe for large gasoline plants over which water is delivered by means of more or less finely divided spray, covering the pipes and flowing over them in film exposed to circulating air. That portion of the water which in its circuit through the cooling towers fails to find contact with the pipes and falls uninterrupted to the catch basin below gets the benefit of more or less perfect atmospheric cooling and, to date in the writer's knowledge, no definite measurements have been taken and made known of the relative amount of water which does not make contact in its fall with the cooling pipes. It would appear, however, that such information would be interesting simply and not of essential importance to plant design, in view of the mass of practical data available and reduced to usable terms. The closed type of cooler and condenser immediately connected to the base or catch basins of auxiliary towers constructed especially for the cooling of water will, the writer predicts, ultimately prevail.

Cooling of Gas

The cooling of gas after compression of 30 pounds per square inch will be found, when the use of small bore tubes is employed, to require something like one-half the surface which is called for in the use of 2-inch pipe and an even lower factor when the comparison is made with pipe of larger than the 2-inch size. Effective cooling will be realized with a factor of 125 square feet coil surface per 1,000,000 cubic feet of gas handled per 24 hours. Computed to conditions of common observation, this would indicate a K factor slightly over 10. For the case of 2-inch pipe cooling coils let us accept the foregoing, namely 125 square feet of surface per 1,000,000 cubic feet per 24 hours, and for the properly designed tubular cooler, 65 feet of tube surface.

If we add 20 per cent to the factors offered for cooling of gas at 30 pounds per square m., we shall safely account for the cooling required for recompressors operated to somewhat higher ranges, usually, of pressures.

For the sake of brevity, we shall omit here the method computation necessary to the checking of the figures presented.

A. T. SMITH NAMED MANAGER

The Hawkeye Oil Co. (South Dakota) and Hawkeye Oil Co. (Delaware), with headquarters at Waterloo, Iowa, and operating service and tank stations in the States of Iowa, Illinois, Indiana, Kentucky and Minnesota, now are under the active management of A. T. Smith, vice president and treasurer. A. H. Caward and H. C. Wurster, formerly constituting the management of these two companies, recently resigned.

TWO-STORY MOTOR BUSES

NEW ORLEANS, La., Aug. 2.—New Orleans will soon have two-story automobile buses on St. Charles Avenue like those on Fifth Avenue in New York and Sheridan Road and Lake Shore Drive in Chicago, if plans of Mayor Behrman and Commissioner of Public Utilities Hali are realized. The mayor and commissioner have been considering all possible means to relieve street car congestion during the peak hours, and at the same time to provide tourists and visitors with a means to see the city in an inexpensive way.

WANTED
A
Refinery Foreman
See
Classified Section

Mexican Shipments In June Were Under Nine Million Mark

By George Blardone

TAMPICO, Mexico, Aug. 2.—For the first time since February, 1920, shipments of petroleum from Mexican ports of primary clearance went below the 9,000,000-bbl. mark from natural causes during the month of June last. It will be recalled that in July and August, 1921, owing to disagreements with the government over tax matters, a number of the major exporting companies stopped shipments, causing exports to drop around 6,000,000 bbls. those two months. The movement during the month of June from ports of primary clearance totaled 8,910,852 bbls., a decrease of 2,296,725 bbls. from the movement in June, 1924; and, further, a decrease of 1,170,796 bbls. from the May movement.

Tampico dispatched practically the entire June clearances, Tuxpam being responsible for only 56,773 bbls. during the month. The heavier oils of the northern fields in the movement totaled 6,958,016, the remainder being south fields production.

The movement, in detail, follows:

FROM TAMPICO
By Huasteca Petroleum Co.
(Pan American Eastern)

June Rig		Vessel, Destination—	Bbls.
1	Ss.	F. R. Kellogg, New Orleans	65,852
1	Ss.	Norman Bridge, Jacksonville	*41,448
1	Ss.	Cerro Azul, New York	*76,703
2	Ss.	C. E. Harwood, New Orleans	†34,747
2	Ss.	C. A. Canfield, Boston	*60,341
2	Ss.	G. G. Henry, Galveston	*66,513
3	Ss.	Crudeoil, Miami	*14,563
3	Ss.	E. L. Doheny, New York	*61,048
3	Ss.	E. L. Doheny III, N. Y.	*74,571
4	Ss.	P. H. Harwood, New York	*65,994
4	Ss.	Harold Walker, New Orleans	67,968
5	Ss.	J. M. Danziger, Galveston	*70,372
6	Ss.	Caloric, Southampton	*59,930
6	Ss.	Dean Emery, New York	*67,391
6	Ss.	W. H. Doheny, New Orleans	65,383
7	Ss.	O. D. Bennett, Baltimore	†28,000
7	Ss.	O. D. Bennett, Jacksonville	†23,862
8	Ss.	Mantilla, Portland	*52,246
8	Ss.	Montana, Boston	*63,905
9	Ss.	Fueloil, Miami	*14,499
9	Ss.	G. G. Henry, New York	*61,907
10	Ss.	Mexoil, Houston	*14,878
11	Ss.	Wm. Green, Philadelphia	63,575
11	Ss.	Chas. Harwood, New Orleans	†34,739
12	Ss.	Herbert G. Wylie, Tampa	*40,714
13	Ss.	J. M. Danziger, New Orleans	67,461
14	Ss.	Fred. Ewing, Galveston	*66,023
14	Ss.	Elisha Walker, Portland	*65,285
15	Ss.	Norman Bridge, New York	*41,172
15	Ss.	Nora, Providence	*74,514
17	Ss.	E. L. Doheny, Jr., Santos	*85,339
18	Ss.	Meline, Norfolk	*62,230
18	Ss.	Cerro Azul, New York	*77,955
18	Ss.	J. O. Boyd, New Orleans	†19,164
19	Ss.	Mexoil, Miami	*14,766
20	Ss.	Mirlo, Portland	*62,638
20	Ss.	Cerro Ebano, New York	*76,947
20	Ss.	S. M. Spalding, New Orleans	64,971
21	Ss.	Mendocino, Boston	*62,697
21	Ss.	Gymeric, Baltimore	*4,581
22	Ss.	Gymeric, Baltimore	†73,706
22	Ss.	Fueloil, Houston	*14,591
22	Ss.	F. Ewing, New York	*63,202
22	Ss.	E. L. Doheny, Panama	*61,032
24	Ss.	Oyleric, Southampton	*51,843
24	Ss.	Herbert G. Wylie, Houston	*38,447
25	Ss.	C. A. Canfield, Jacksonville	*59,771
26	Ss.	P. H. Harwood, Providence and Fall River	*64,144
26	Ss.	E. L. Doheny III, Galveston	*76,962
26	Ss.	O. D. Bennett, Providence and New York	†52,631
28	Ss.	Harold Walker, New York	*64,779
28	Ss.	Fueloil, Miami	*14,728
30	Ss.	Mexoil, Miami	*14,900
30	Ss.	J. O. Boyd, New Orleans	†19,224
		Bunker deliveries	154,144
		Total	2,959,985

By Transcontinental Petroleum Co.

June Rig		Vessel, Destination—	Bbls.
1	Ss.	Eurana, Charleston	62,189
1	Ss.	Muskogee, Baltimore	65,757
1	Ss.	Albercolite, Montreal	79,623
4	Ss.	Gedania, Montreal	84,844
5	Ss.	Calgarolite, Ioco, B. C.	72,946
5	Ss.	Dora, Havana and Sagua	47,297
5	Ss.	Glenpool, Key West	53,757
6	Ss.	Malabar, New York	71,950
8	Ss.	Cement Smith, New York	71,518
9	Ss.	Ardmore, San Juan	68,041
9	Ss.	Ardmore, San Juan	*7,360
10	Ss.	W. A. Reidemann, Baltimore	98,816
10	Ss.	Trinidadian, Banes, Cuba	31,431
11	Ss.	Princeton, Texas City	50,734
12	Ss.	Malacca, New York	67,101
13	Ss.	Hoxbar, Baltimore	69,882
14	Ss.	Cape Ann, New York	63,920
14	Ss.	Vaarli, Maurer's N. J.	55,849
14	Ss.	Eurana, Jacksonville	*55,765
15	Ss.	Hugoton, New York	67,222
15	Ss.	Glenpool, Baytown	52,603
17	Ss.	Matinicock, New York	76,186
18	Ss.	Mevania, New York	64,714
18	Ss.	Durango, Baltimore	66,086
18	Ss.	Imlay, New York	63,171
19	Ss.	Dora, Port Tampa	42,685
19	Ss.	Halsey, New York	66,752
20	Ss.	Glenpool, Key West	41,712
25	Ss.	Princeton, Mariel, Cuba	48,904
26	Ss.	Eurana, Jacksonville	59,737
27	Ss.	H. H. Rogers, Montreal	94,529
28	Ss.	Argon, Providence	62,156
29	Ss.	Mary Luckenbach, Key West	47,272
29	Ss.	Glenpool, Matanzas and Nuevitas	49,029
		Bunker deliveries	99,956
		Total	3,161,494

By Cia. Mexicana-Holandesa La Corona, S.A.
(Royal Dutch-Shell)

June Rig		Vessel, Destination—	Bbls.
1	Ss.	San Gerardo, Key West	76,359
1	Ss.	San Gerardo, Key West	*16,286
2	Ss.	Scot. Musician, Key West	60,155
5	Ss.	F-Sulphur 1, Freeport	19,316
6	Ss.	Louisiana, Port Arthur	15,189
7	Ss.	La Cresenta, New Orleans	54,192
7	Ss.	Scot. Minstrel, Philadelphia	61,279
8	Ss.	F-Sulphur 6, Freeport	28,000
9	Ss.	Caloria, Puerto Padre, Cuba	42,066
10	Ss.	F-Sulphur 1, Freeport	19,099
10	Ss.	Trivia, Key West	*41,068
11	Ss.	Saxicava, New Orleans	†33,064
12	Ss.	Absia, Key West	*44,779
13	Ss.	F-Sulphur, Freeport	27,446
15	Ss.	Lacuna, Key West	48,048
16	Ss.	F-Sulphur 1, Freeport	18,951
18	Ss.	Davanger, Key West	51,729
18	Ss.	F-Sulphur 6, Freeport	27,454
18	Ss.	La Crescenta, New Orleans	51,868
19	Ss.	El Oso, Key West	59,951
21	Ss.	Tamiahua, Port Arthur	69,997
22	Ss.	Scot. American, Key West	60,778
22	Ss.	Occidental, Port Arthur	62,388
23	Ss.	Caloria, New York	39,884
23	Ss.	F-Sulphur 6, Freeport	27,658
28	Ss.	Scot. Minstrel, Key West	56,008
30	Ss.	La Crescenta, Key West	50,121
		Coastwise deliveries	99,958
		Bunker deliveries	73,636
		Total	1,345,727

By Mexican Eagle Oil Co., Ltd.

June Rig		Vessel, Destination—	Bbls.
1	Ss.	Louisiana, Port Arthur	15,208
3	Ss.	North Devon, Brazil Ports	†33,518
3	Ss.	San Valerio, Key West	*59,429
3	Ss.	San Patricio, Key West	*96 909
19	Ss.	San Eduardo, Rio Janeiro	*50,908
28	Ss.	Baron Dalmeny, South America	†12,285
29	Ss.	San Gregorio, Key West	*97,622
30	Ss.	San Valerio, Key West	*57,972
		Coastwise deliveries	†101,818
		Coastwise deliveries	*141,947
		Coastwise deliveries	168,996
		Bunker deliveries	47,719
		Total	884,331

By Mexican Sinclair Pet. Corp.

June Rig		Vessel, Destination—	Bbls.
1	Ss.	W. L. Connelly, P. Barrios, C. A.	31,484
5	Ss.	Mirita, Cienfuegos	55,182
5	Ss.	Harry Farnum, New Orleans	31,358
9	Ss.	Madrono, New Orleans	56,301
10	Ss.	E. W. Sinclair, Havana	44,840
18	Ss.	Gene Crawley, Tela, Hond., C. A.	28,643
18	Ss.	Mirita, Cienfuegos	52,193
19	Ss.	W. L. Connelly, New Orleans	28,786
19	Ss.	A. E. Watts, New Orleans	71,985
20	Ss.	E. W. Sinclair, Havana	42,994
25	Ss.	Harry Farnum, New Orleans	31,431
29	Ss.	Mirita, Nuevitas	53,889
30	Ss.	Gene Crawley, P. Barrios, C. A.	29,608
30	Ss.	E. W. Sinclair, New Orleans	43,806
		Bunker deliveries	25,610
		Total	628,110

By East Coast Oil Co.

June Rig		Vessel, Destination—	Bbls.
1	Ss.	Torres, Galveston	51,279
2	Ss.	F-Sulphur 6, Freeport	27,303
6	Ss.	Topila, New Orleans	49,866
12	Ss.	Torres, Galveston	49,872
16	Ss.	Topila, Galveston	46,849
20	Ss.	F-Sulphur 1, Freeport	19,241
21	Ss.	Torres, Galveston	50,319
26	Ss.	F-Sulphur 1, Freeport	18 946
29	Ss.	Torres, Galveston	50,410
		Bunker deliveries	4,578
		Total	368,663

By The Texas Co.

June Rig		Vessel, Destination—	Bbls.
7	Ss.	Louisiana, Port Neches	11,422
7	Ss.	Louisiana, Port Neches	*160
10	Ss.	Virginia, Norfolk	57,231
12	Ss.	Pennsylvania, Providence	*59,220
28	Ss.	Louisiana, Matanzas	25,695
28	Ss.	Texas, Marcus Hook	*55,228
		Bunker deliveries	11,353
		Total	220,291

By Mexican Gulf Oil Co.

June Rig		Vessel, Destination—	Bbls.
24	Ss.	Currier, Port Tampa	42,705
27	Ss.	Ligonier, Savannah	30,140
30	Ss.	Dean Emery, Philadelphia	65,748
		Bunker deliveries	5,792
		Total	144,385

By Panuco Boston Oil Co.

June Rig		Vessel, Destination—	Bbls.
2	Ss.	A. E. Watts, Philadelphia	69,412

By Mexican Atlas Oil Corp.

June Rig		Vessel, Destination—	Bbls.
28	Ss.	F-Sulphur 6, Texas City	39,707

By Mexican Oil Products Corp.

June Rig		Vessel, Destination—	Bbls.
6	Ss.	Wm. Isom, Baltimore	28,612
		Bunker deliveries	3,362
		Total	31,974

FROM TUXPAM
By Mexican Eagle Oil Co., Ltd.

June Rig		Vessel, Destination—	Bbls.
2	Ss.	San Gerardo, Key West	*11,643
30	Ss.	San Gregorio, Key West	*7,414
		Bunker deliveries	37,716
		Total	56,773

JUNE SUMMARY

From—	
Tuxpam	8,854,079
Tuxpam	56,773
Total June, 1925	8,910,852
Total June, 1924	11,207,575
Decrease June, 1925	2,296,723

DIVISION OF MOVEMENT

To—	
United States	6,647,250
Cuba	514,951
Mexican Coastwise	612,719
Canada	331,942
South America	182,050
United Kingdom	130 217
Central America	89,735
Panama	61,032
Bunkers (to balance)	440,956
Total	8,910,852

CLASSES

Crudes	5,247,394
Topped crudes	2,756,857
Distillates	465,645
Bunkers (to balance)	440,956
Total	8,910,852

*Denotes topped crudes.
†Denotes distillates.

NEW NATURAL GAS SECRETARY

Guy F. Batchelor of Los Angeles, newly chosen secretary of the Natural Gas Association of America, succeeding W. B. Way, resigned, was the guest of Tulsa friends at a dinner in the Oil Capital while on his way to Pittsburgh, Pa., to assume the duties of his new office. A. W. Leonard, vice president of the Oklahoma Natural Gas Co. and president of the Natural Gas Association, presided and introduced Mr. Batchelor. Among those present were J. Bennett Porter, R. W. Hendee, E. W. Bagley, R. S. McBeth and E. A. Clark, all of the Oklahoma Natural Gas Co.; Frank Hinderliter, of the Hinderliter Tool Co., and W. G. (Bill) Long.

UMPLEBY STUDYING OIL MINING

OKLAHOMA CITY, Okla., Aug. 3.—Dr. Joseph B. Umpleby, general manager of the Goldelline Oil Corp. of Oklahoma City is in Europe to make a study of mining reclamation processes used in Germany and France. He will return about September 1. He went directly in the interest of the Petroleum Reclamation Co., of New York, of which he is an official, which is experimenting with new reclamation processes in Bradford fields in Pennsylvania.

RAILROADS CHANGE TO MOTORS

Steam passenger transportation has been superseded by gasoline motor cars to Smethport, county seat of McKean County, Pennsylvania, by the Kushequa and Shawmut Railroads. The Pennsylvania Railroad plans to follow with gasoline motors. On short hauls gasoline is more economical and competition with bus lines can be maintained.

A RICH SCHOOL LAND LEASE

OKLAHOMA CITY, Okla., Aug. 1.—Receipt by the State of nearly $1,000 a day in July as its one-eighth share of the oil produced on a quarter-section of State school land in Garfield County increased the total of money received from that source to nearly $500,000. The amount received to March 14 was $415,661. It was about that date that a deeper producing sand was found at about 4,000 feet in that territory that greatly increased production.

ADVANCE IN SALT CREEK

CASPER, Wyo., Aug. 4.—Midwest Refining Co. has announced an advance in prices for the Salt Creek crude oil practically all of which is purchased under contract. The new schedule is: 29 to 29.9 degrees, $1.48; 30 to 30.9, $1.56; 31 to 31.9, $1.64; 32 to 32.9, $1.72; 33 to 33.9, $1.80; 34 to 34.9, $1.88; 35 to 35.9, $1.96; 36 to 36.9, $2.04; 37 and above, $2.12.

INCREASES IN CAPITAL STOCK

OKLAHOMA CITY, Okla., Aug. 1.—The Foster Petroleum Corp. of Delaware has increased the amount of its capital investment in Oklahoma from $10,000 to $930,000. The increase is one of the largest noted in the Secretary of State's records in recent years. Another unusually large increase was that made by the Continental Oil Co. of Maine, from $100,000 to $2,856,222.

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All Colors for Your Particular Needs

Makers of paints for the Refinery, Tank Farm, Pipe Line, Tank Cars and Stations. A complete painting service.

Write for catalogue on paints for the oil industry.

Offices and warehouse stocks in all principal cities

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All hoists are capable of lifting—
They all look more or less alike—
They all cost about the same—
But
if you simply insert the words
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after the word "A" you will receive one that is built entirely different from all others—you will receive one with a regular internal oiling system — a ball bearing detachable swivel load hook—two supplementary steel arms—ball bearing steel driving pinion, etc., etc.—too many exclusive features to get into this space.
And they cost no more.
May we send you our "family tree"?
It's Eclipsing all others
and it will soon be a Total Eclipse
WRIGHT

Pay More Attention to Laboratories

Refiners Realize Necessity of Having Modern Equipment to Assure Quality Products at Minimum Production Costs

By George W Reid, C. E.
American Refining Co.

In an early day laboratory in which the writer first began pursuit of the "elusive hydrocarbon," the work was done in the rear of a barn-like garage. The equipment consisted of a questionable hydrometer or so and a distillation apparatus of home manufacture—surrounded there by mechanics and their tools. In this building certain experiments were conducted, the results of which pointed to the advisability of erecting certain hollow cylindrical chambers on the stills called "towers," and of operating five shell stills continuously.

Upon the refinery chemist has ever fallen the task of investigating the new and unusual in refining practices and methods, and to ascertain, if possible, of what value are such innovations to his organization's peculiar type of equipment and how such new methods will assist in securing his company's requirements.

The laboratory and its staff of workers has passed through that stage wherein it was merely a "necessary evil" and an undesired expense, and has speedily became a most important department in the progressive refiner's organization. It is looked to for advice, guidance, and in larger organizations for absolute control of plant operations.

Necessary in Purchasing

The purchasing agent relies upon cooperation from the chemist in his judicious selection of materials for his company's use. In the matter of chemicals, for example, a purchase of an inferior sulphuric acid—one running low in acid, or high in nitric acid, or selenium, may cause very injurious and expensive results to the oil which is treated. Impurities also occur in other chemicals upon which the refiner relies for use in his treating operations.

In the matter of paints for use upon tanks, stacks, towers and other structural work, the chemist is called upon for his understanding of the requirements before any decision is reached. Rust preventive involving inside paint for tank cars freighting gasoline, for instance, is a problem that becomes an important item. Despite the claims of manufacturers of such protective substances there are several of such coatings which are absolutely useless because of their certain tendency to slowly dissolve, or to crack and scale off. In such a case the laboratory makes such tests as are necessary before the purchase of the paint is made.

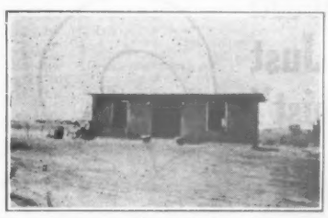
Many other such problems are presented to the chemical department for solution. Proper packings for various pumps, fittings which may corrode or must not corrode, insulation materials which must be resistant to the action of hot steam, sweating, rains, snow, etc. Various types of metal need be purchased with understanding of its applicability and usage. Water source of supply should not be contracted for until the laboratory has inspected such water and analyzed it for incrusting and non-incrusting solids. The use of water for boiler consumption then is followed by installation of proper scientific water treating apparatus; all of which is usually taken care of by the laboratory working in conjunction with the marketers of water treatments. Many indeed are the problems in this phase of the work alone which the chemist and the laboratory is called upon to solve.

Inspection of Products

By frequent inspection of products at various stages of their manufacture the chemist is enabled to point out to the operators their errors and thus, by assisting in their correction, to assure absolute uniformity of such distillates. Such inspection work, as a rule, comes under the heading of routine testing. The modern refinery is equipped with temperature recording and controlling instruments throughout, but certain routine inspection is necessary as a check against these instruments, which are unfortunately, not infallable. Then again, operating conditions are frequently changed—a new crude, or different type of crude, or a rerun stock may be blended in with regular charging stock, or a complete change-over may be made—and in such case, operations must be changed to meet the new conditions. This often necessitates a complete rearrangement of temperatures, or charging rate, or an increase or decrease in the amount of steam used in distillation. Frequent inspection of streams and products often prevents damage due to such changes by detecting the error before serious trouble occurs.

Along these lines it should be noted that a very commendable practice is prevalent among chemical departments, namely, that of making a complete fractional gravity analysis of crude oil charging to stills two to four times weekly, and checking this analysis back against the plant accountants daily or weekly percentage estimate. This assists in controlling both uniformity of product and yields in percentage of various products.

Routine, or laboratory work is no longer done in the rear of some outbuilding, but to such importance has this department grown that now the usual practice is to equip a large, airy, well lighted room or building with the best of modern standardized equipment. These buildings are usually designed and constructed with the comfort of the chemists in mind. Ventilators, hoods to carry



Refinery laboratory, Noble Oil & Gas Co.'s 5,000-bbl. skimming plant, Burkburnett, Tex.

away the fumes, suction fans installed to assure the constant removal of foul air and gases. Isolation of the building to aid in removal of fire hazard is important and this practice also decreases the popularity of the laboratory as a public thoroughfare and loafing place. The laboratory that is used as a plant smoke house and social center, is as a rule, not given to the accuracy and reliability which the refiner has every right to expect of his chemical department. Sufficient labor is employed so that at no time is an operative rushed, for in rushing tests accuracy is precluded and an inaccurate test is almost as useless as no test at all.

The equipment has grown from a home made condenser box to several standardized distillation apparatus, with boxes insulated to prevent sweating and dripping. Instruments, such as thermometers and hydrometers are checked for accuracy against certified instruments as a further assurance of uniformity of results. Flash and fire instruments of latest design viscosimeters, chronometers, color machines, barometers, carbon residue apparatus, corrosion testing equipment, calorimeters, reagents and mina-

Interior routine testing room of American Refining Co.'s Wichita Falls laboratory. Note cabinet insulation of condenser boxes.

ture refineries, etc; these are now the usual items of equipment found in the modern laboratory. Compressed air, elec-

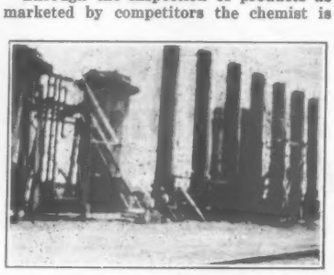
Interior of laboratory of Miller Petroleum Co.'s Wichita Falls Refinery. Note cabinet insulation of condenser boxes.

tricity, water and gas—these, too, are found in abundance.

Often the chemist concludes that results of experiments when conducted in glass do not correlate with similar work when carried out in steel, so he builds a small refinery at his back door and proceeds to experiment in distillation, fractionating and treating duplicating actual plant conditions.

Miniature fire or steam still and agitator, Panhandle Refining Co., Wichita Falls, Tex. Laboratory in back ground.

Through the inspection of products as marketed by competitors the chemist is



Continuous treating system for pressure distillate, American Refining Co., Wichinta Falls, Tex.

assisted in keeping his company's fuels and lubricants of as high grade or a little better, and in so doing he enables the sales departments to dispose of the refinery output more easily and often at a premium.

Cracking Unit Problem

With the extensive application of cracking processes during the last few years has come additional problems. Beside the ever present problem of proper and efficient treating of pressure distillate has come the additional problem of distillation. Shall it be fire or steam or both? Then the question of fractionation apparatus. Types of towers, building type, recycle selective type or none whatever. After distillation and fractionation then the problem of sweetening. Shall the gasoline be sweetend or not?—or as often is the case, can pressure gasoline be sweetened or can it not—depending upon its tendency to become colored and unstable to doctor test. This is a problem which at present confronts the petroleum chemist, and its solution is as variable as are the types of cracking processes and the many methods of operating them.

Color, it seems, is the greatest problem of them all, for the results to experimentation are so variable and conflicting. Certain types of cracking units operating under one method on a particular type of cracking stock, offer little difficulty to the chemist when treating for corrosion, doctor test, or stability of color. While other types, or even the same type of unit operated under a different method, yield a gasoline which offers seemingly unreasonable difficulty to sweetening, to stability of color or to corrosion to copper. The laboratory here is called upon to experiment with the cracking unit to the end that the problem, may, if possible, be solved, or that operation of such unit may be controlled so that the maximum amount of uncolored gasoline may be produced which will be stable to color, doctor test and corrosion.

Authoritative reference is difficult, or next to impossible to obtain. Each installation of cracking unit seems to offer its own peculiar difficulty to treating to specifications. The works of the best known scientists do not agree and even their own experiments present variable results. The extreme difficulty of such research is attributed to the fact that all crude petroleums are somewhat different in inherent characteristics, both physical and chemical; and further, that no two companies are operating similar units in a similar manner. Still further is to be considered the great difference in mechanical arrangement, temperatures and pressures, prevailing with the number of different processes in use. Such problems are prevalent wherever cracking units are operated and the laboratories of the refiner are working their way out of a great maze and tangle of contradictory and conflicting data, by experimenting toward the solution of their own peculiar problems in their own laboratories.

OIL FROM COAL FOR TIES

A Norwegian celluloid factory which last December installed machinery for the extraction of oil from "Kings Bay" coal, experienced some difficulty at the outset due to the difference in quality between the coal received and that with which the experiments had been made. From February to the end of May, 1925, however, the production has been about 90 tons of oil, delivered to the State Railway for the impregnation of railroad ties. The experiments and cooperation between the factory and State Railway are stated to have proved successful.

The Cross Cracking Process

Superlatives and fancy comparisons are not needed to advertise the Cross Cracking Process. Its steady, year in and year out money making ability speaks louder than any advertisement we can write.

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GROWING consumption of petroleum products is creating increased demand for tank cars. Protect your shipments by making reservations now. Our increased supply of tank cars for lease, or for sale, enables us at this time to insure you full and prompt service, if your wants are known immediately. So tank users should not delay in reserving cars to meet their future needs.

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Knowledge

BACK of every "United" product there is a complete knowledge that makes perfection in every detail possible. It is the "know how" that has been gained from 30 years research work and manufacturing experience.

The design, the material and the construction assure you of maximum value and perfect performance in "United" Refining and Producing Equipment and Supplies.

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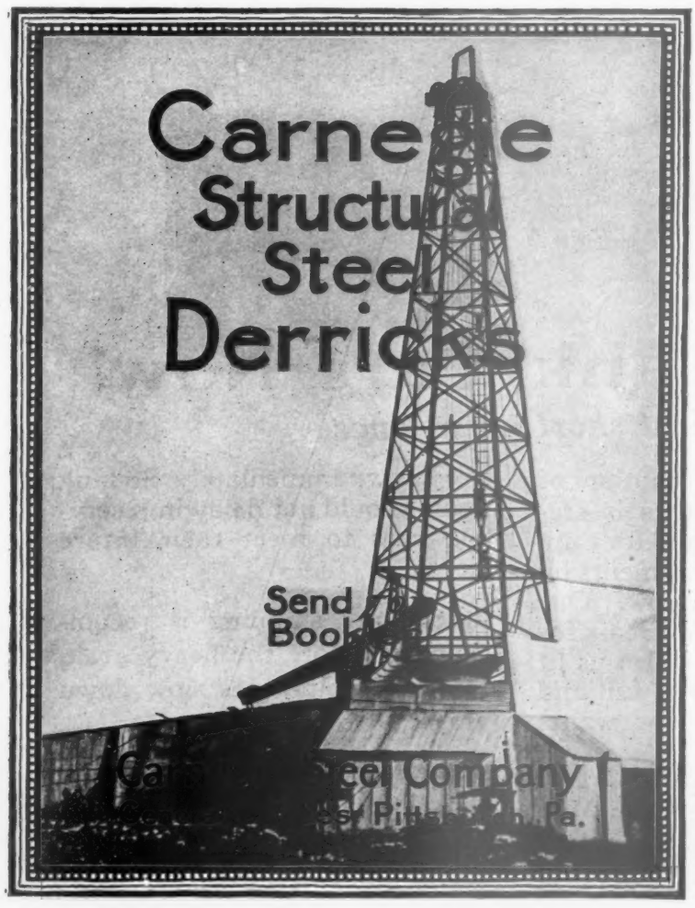


MOTOR BUS FEEDERS FOR NEW YORK LINES

NEW YORK, Aug. 2.—Leverett S. Miller, president of the New York, Westchester & Boston Railway Co., announces details of the negotiations in progress for the formation of an extensive motor bus system of "feeders" for tne railroad's Metro-Urban lines operating between New York City and the northward suburbs. It is believed the new company will be about a $1,000,000 organization. The system woold serve New York's most popular and most rapidly developing suburbs. It would extend from the Hudson River to Long Island Sound.

Major municipalities to be served, including those now served by the Metro-Urban commuter system and the trolley lines of the Westchester Street Railway Co. and the New York & Stamford Railway, probably will include White Plains, Scarsdale, Elmsford, Tarrytown, Silver Lake, Larchmont, Mamaroneck, Harrison, Rye and Port Chester. All routes will give direct access to stations on the Metro-Urban all-electric commuter system, which operates 225 trains daily from Westchester into New York City.

"With a system such as we contemplate, the Metro-Urban will reinforce its position as the railroad offering commuters of Westchester the quickest, cheapest and most direct route into all sections of New York City," said Mr. Miller.

"New communities are springing up like magic along new highways outside the zone of trolley operation in Westchester. The County Highway Commission is spending $20,000,000 in the development of new roads, now parkway boulevards and trunk lines. Other millions are being spent in developing parks, beaches and resorts.

"Because trolley routes are fixed and lack the mobility of the motor bus, the trolley is unable to serve these newly developed districts, to aid in the settlement of new suburbs or to compete for the resultant new traffic."

The first step to be taken by the organizers will be to apply to cities and villages concerned for permission to operate buses within their confines. The second will be to obtain from the Public Service Commission a certificate of "convenience and necessity."

OIL AND GAS INDUSTRY AT LOUISIANA FAIR

SHREVEPORT, La., Aug. 2.—One of the biggest celebrations at the 1925 Louisiana State Fair will be staged October 31, which has been officially designated "Oil and Gas Industry Day."

To give a demonstration reflecting the importance and the magnitude of the oil and gas industry in this territory, the leaders of the industry have entered into the State Fair plan with vigorous earnestness, Manager W. R. Hirsch stated.

The general committee includes C. K. Clark, vice president of the Standard Oil Co. of Louisiana; C. M. Bennett, of the Louisiana Oil Refining Corp.; N. C. McGowan, of the Palmer interests; R. O. Roy and R. W. Howe.

One of the features will be a parade in which there will be a number of floats representing different branches of the industry, such as executive, administrative, office men, field men, scouts, geologists, etc. There will be contests for the field men and others connected with the oil industry, through which the spectators will be given an idea of the magnitude of the work of each branch of the industry, etcfl

It is planned by the oil and gas interests to have between 10,000 and 15,000 persons in the parade.

NEW SAND IN VENEZUELA

The Lago Petroleum Corp. reports an important development in the La Rosa district of Venezuela by finding a third producing sand in a well which started flowing 4,000 bbls. a day from 2,246 feet, or 200 feet below most of the production in the district. Gravity of the oil is said to have been somewhat higher than in the shallower wells.

Just Common Sense

Two oceans, a gulf, great lakes, numerous rivers, and harbors form the natural boundaries of our country. These boundaries are accidental and cannot be increased.

Your business boundaries are limitless. You can confine your actions to a single area or widen your scope until your products are used in every country in the world — without performing a miracle. Just common sense!

For instance, take the Petroleum Industry. Every year billions of dollars are paid to American manufacturers for the tools, buildings, equipment, and material, used in the United States and foreign countries.

Naturally, the organizations that get the bulk of Oil Industry orders are those who are known to the Industry and who can combine quality with speedy service.

Every week, more than 25,000 oil men read The Journal in oil fields, refineries, pipe line stations, natural gasoline plants, supply stores and business offices. Journal advertisers get the bulk of their business.

You can sell to the world-wide Billion Dollar Petroleum Industry through The Oil and Gas Journal Classified Wants Section. It doesn't cost much. A five-line advertisement can be run a month for $3.50. Six words usually make a line.

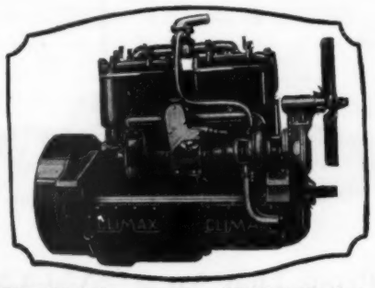
Mail your advertisement TODAY and The Journal will deliver your message to every oil producing country in the world.

The Oil and Gas Journal
Classified Wants Dept.,
Tulsa, Okla.

A Faith That Moves MOUNTAINS

Exchequer Dam, constructed by Bent Bros. Inc., M. H. Slocum, Supt. Los Angeles, Calif.

THE scene at left of the building of the mammoth Exchequer Dam is a striking illustration of the contractor's faith in the Trustworthy Power of Climax Engines. This dependable power plant operating Plymouth Gasoline Locomotives as a haulage unit put the immense amount of material into place. Truly here is Engine "Faith" that moves mountains.



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Pittsburgh, Pa.—Beckwith Machinery Co., Cor. Front & Brown Sts.
Portland, Ore.—Coast Steel Machinery Co., 1 Porter St.
St. Louis, Mo.—Tulley Equipment Co., 508-9 Title Guaranty Bldg.
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Be sure your machines are equipped with

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AT A predetermined speed, the overhanging flange of the turbine rotor expands and fills the clearance space in the turbine cylinder.

The consequent powerful braking action prevents the possibility of destruction of the machine and possible injury to operator.

Other Important Characteristics of the Westinghouse 1½ kw. Turbine Generator Unit are:

The turbine rotor is a solid steel forging with buckets milled in the inside periphery of the overhanging flange.

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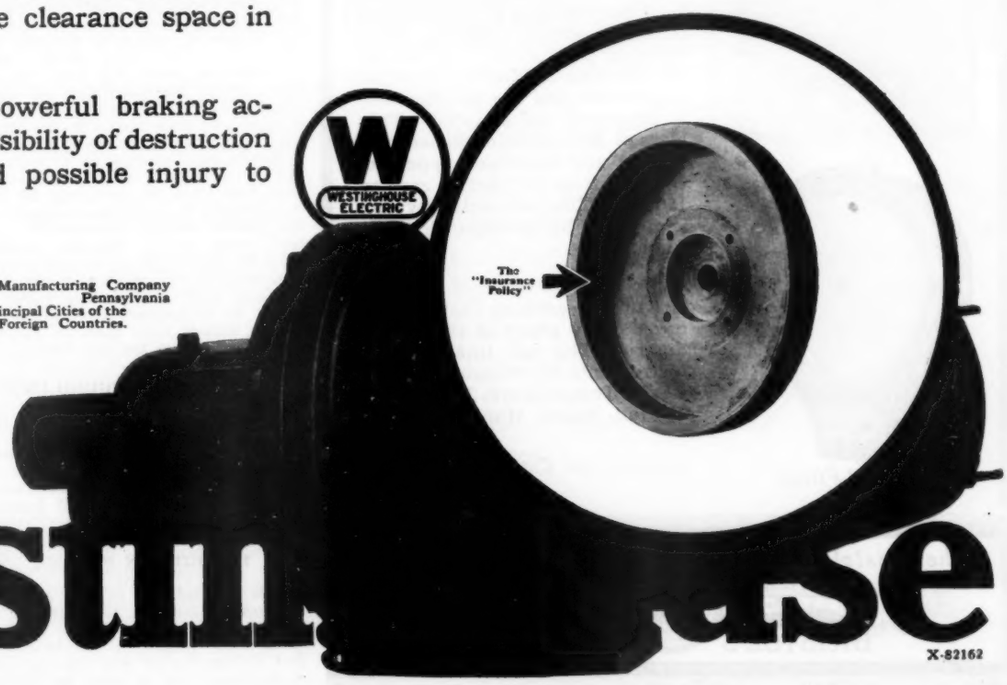
A fly ball, centrifugal, shaft type governor regulates the speed.

Escaping steam is prevented by glands which require no adjustment.

The generator rotor is carried on ball bearings of extra large size.

Turbine and generator ends are completely isolated. Water and steam cannot enter the generator from the turbine.



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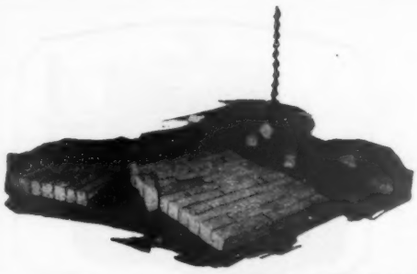

Proof That An ADAMANT Joint Is Stronger Than the Brick!

This arch was suspended from a chain by one of the header course brick.

Lacking the strength to hold the weight of the entire construction, the brick cracked, and the arch fell to the floor.

But—

NOT A SINGLE ADAMANT JOINT PARTED, even though the drop cracked the brick through the entire height of the construction, as you will note from the picture.

Strength greater than that of the brick it binds has long been a characteristic of an ADAMANT joint.

In your fire brick construction—wherever you use a fire brick—you need ADAMANT. It will assure you of less brick repair work and, consequently, lower costs.

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FIRE BRICK CEMENT

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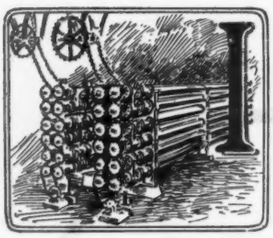

N the wax plants of big oil refineries you will find Bristol's Recording Thermometers Class I. They are used for the various processes—tanks, filters, cake-forming presses, etc., where the oil fraction is chilled by brine circulation and the paraffin wax is separated and sweated. This class of Bristol's thermometers is of the self-contained type, recording from 60° below zero to 150° F. The motivating system is operated by the expansion of a liquid.

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Bristol's Recording Instruments cover every phase of the oil industry. The full line includes instruments for Pressure, Liquid Level, Temperature, Electricity, Motion, Speed, Humidity, Etc.

Ask for our Catalogs.

The Bristol Company *Waterbury, Connecticut*

FOR 36 YEARS — MAKERS OF — BRISTOL'S — RECORDING INSTRUMENTS

BIT DRILLS THROUGH A PREHISTORIC CEDAR

LOS ANGELES, Cal., Aug. 2.—Rotating at a depth of 1,100 feet, a Standard Oil Co. drill, in a wildcat well at Greenville, east of Huntington Beach, passed through a prehistoric cedar log or tree, cutting through eighteen feet of well-preserved wood.

The incident was revealed by the log of the well, indicating foot by foot, the nature of the earth's formation through which the drill passes. The average log tells of brown shale, streaks of sand, clay, fossil shells, etc., as the drill progresses. This is probably the first time that the log of an oil well anywhere in the world has told so strange and marvelous a story in five words:

"Eighteen feet of cedar wood."

Geologists have been unable to agree as to whether the log or tree lies horizontally or stands up in a perpendicular position. If it is standing it is evidently leaning. If the tree was felled ages ago it was evidently one in a forest of giants similar to the gigantic redwoods which now stand in Mariposa Grove.

STATE'S CARS COST 4.01 CENTS A MILE

HARRISBURG, Pa., Aug. 2.—The department of Highways operated 307 motor cars of various makes a distance of 3,167,000 miles in 1924 at an average cost of 4.01 cents a mile, statistics announced by the Department of State and Finance disclosed. The cars averaged 14.5 miles to the gallon of gasoline and 88.1 miles for each quart of oil.

The cost of operating 152 cars of different makes a total of 902,000 miles in seven months ending May 31 by all other appointive departments averaged 4.15 cents a mile. These cars averaged 12.95 miles to the gallon of gasoline and 72-16 miles to each quart of oil.

The operation of 737 trucks owned by the State cost 28.5 cents a mile. They averaged 3,09 miles to the gallon of gasoline and 14.5 miles to the quart of oil.

In announcing these figures, Dr. Clyde L. King, secretary of the commonwealth, said they were exclusive of depreciation charges which the department is now compiling.

NEW BRITISH STORAGE

New "clean" petroleum storage facilities are now available in Great Britain for the shipper without facilities of his own. The Preston Oil Wharves Co. Ltd., has opened its 10,000-ton installation for gasoline and kerosene at Preston, on property adjoining the Shell and Agwi depots. The plant consists of 500 and 2,000-ton tanks, 300 feet from the river with a depth sufficient for ships drawing 23 feet alongside. The plant is served by both road and rail transport. Applications for space in this installation were received up to June 15, and it is reported they covered more than four times its tank capacity and it is planned to start the duplication of the present facilities immediately. The land owned by the company provides room for 50,000 tons total tankage, and promoters are of the opinion that they will soon be in a position to utilize all of it. It is reported that the charges will be slightly lower than the Medway charges of 3d per ton per week.

ANSON A. GARD FOUND DEAD

BOWLING GREEN, Ky., Aug. 2.—Anson A. Gard, 75, of Buffalo, N. Y., field manager for the Beaver Petroleum Co., was found dead in the bothroom of the Y. M. C. A. here. Heart disease is believed the cause. Gard formerly resided in Canada.

TO DRILL IN PANAMA

It is reported that an area of 11,000 hectares of land in the Republic of Panama, west of Lake Gatum, has been subleased to a large oil company, and that drilling for oil will begin as soon as machinery now en route has arrived.

Will you accept this at our risk?

We Will Guarantee a 50% to 95% Saving in Pulling Costs

Thruout the oil world the firm of Norris Brothers, Inc., is known for its square dealing and quality products. A guarantee coming from this company is, therefore, a guarantee to be depended upon.

Norris Brothers absolutely guarantee NO-CO-RO DROPS & SEATS to outlast two of the best balls and seats you have ever used, *at the very least.* They invite you to select the worst well on your properties, install a NO-CO-RO DROP & SEAT and compare results. If these don't prove the DROP & SEAT 100% more efficient than the ball and seat, your money will be refunded without question or quibble.

This offer is made as a result of hundreds of reports that we have been receiving on DROP & SEAT service. Each report proves more definitely than before the wonderful advance of DROPS & SEATS over balls and seats.

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It costs you nothing to prove the worth of this big improvement. WE take the risk. At your supply house—in the red, white and blue carton—or direct.

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JUNE GASOLINE SALES AN OKLAHOMA RECORD

OKLAHOMA CITY, Okla., Aug. 2.—Over 17,500,000 gallons of gasoline sold in Oklahoma in June were reported on inspection returns made to the gasoline inspection department of the State Oil and Gas Conservation Bureau. The figures are the largest in the history of the department and exceed those of May by 3,000,000 gallons and those of June a year ago by over 5,000,000 gallons. The tax on June sales for road purposes was over $520,000.

The number of gallons of kerosene inspected in June was also the largest of record. The figures were 3,286,631 gallons, compared with 2,232,988 gallons in May. Department officials said the increase probably was due largely to the summer revival in the poultry industry and increased uses of gasoline-driven tractors.

TEXAS-PACIFIC NAMES DONAGHUE GEOLOGIST

The engagement of David Donaghue, widely known consulting geologist, as chief geologist for the Texas-Pacific Coal & Oil Co. has been announced by E. J. Marston, vice president.

From a small beginning in oil in Central West Texas, which expanded with the discovery of Ranger and developments in Eastland and Stephens Counties the Texas-Pacific has been gradually extending its production operations to other sections of the Mid-Continent in recent years. In recent months it has engaged in operations in Smackover, in Southwest Texas, along the Mexican border and in Oklahoma.

Mr. Donaghue was for many years a member of the geological staff of the Gulf Production Co. He is one of the best known and most prominent members of the American Association of Petroleum Geologists.

NEW PERSIAN NEGOTIATIONS

Advices from Persia state that the head of the American Financial Commission in that country, Dr. Millspaugh, is at present in negotiation with American firms with reference to the taking over of an oil concession in North Persia. The concession, which concerns an area of 50,000,000 hectares, will, it is stated, be granted by the Persian Government on the following conditions: The concessionnaire must be a purely American group which is not encumbered with any European interests; the concessionnaire must guarantee Persia a loan of at least $10,000,000, and must pay from 20 to 25 per cent of its net profits to the Persian Government. It is now stated that a large number of applicants have come forward. It is further announced that French and Belgian interests are after the concession, and that the French group has promised the Persian Government a loan of $25,000,000.

PROTECTS WATER WELLS

AUSTIN, Tex., Aug. 2.—The California Oil Co. can recover the value of casing used in water wells on University land in Reagan County, but may not destroy the wells by pulling the casing out of them, the Attorney General Department ruled in an opinion Tuesday to University authorities. The company removed its casing from a dry oil well, but was stopped from drawing the casing from water wells, on the ground that it would destroy the wells.

ARTICLE 27 AGAIN

Exploration and exploitation of Mexican oil fields is possible only through a presidential permit, for the industry is considered a public utility, says a report delivered to President Calles by the mixed commission, appointed to draw up regulations under article 27 of the Mexican constitution. After studying the report, President Calles will send it to Congress.

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Where it is desirable to maintain atmospheric pressure on a system discharging gases to a line, under light pressure, we have especially designed this Regulator to serve. It acts as a safeguard when used in the vapor lines connected to storage tanks, for the recovery of gases, the purpose being to prevent the pulling of a vacuum. Every gas man who has not yet considered the working principles of this efficient Regulator is urged to write for a copy of our catalogue. All technical information is listed along with prices, etc.

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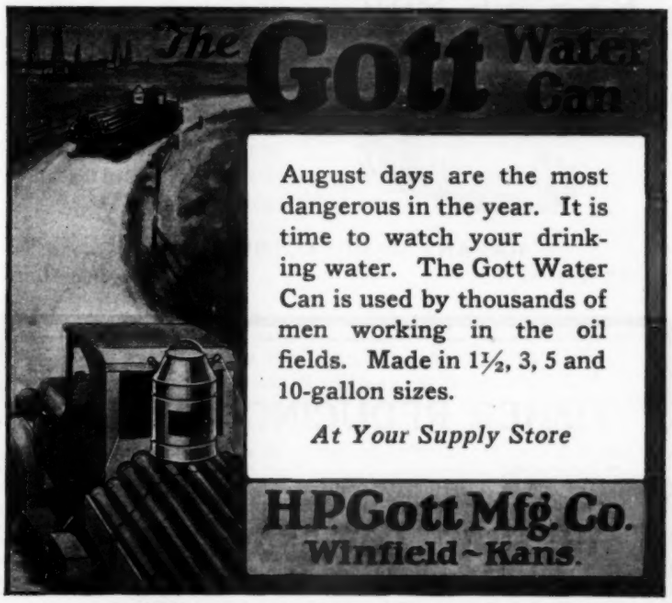
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August days are the most dangerous in the year. It is time to watch your drinking water. The Gott Water Can is used by thousands of men working in the oil fields. Made in 1½, 3, 5 and 10-gallon sizes.
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Venezuelan Oil Fields

Lake Maracaibo, in Northwestern Venezuela, 150 miles by 65 miles at its widest, is almost entirely within the State of Zulia. It describes the shape of a bottle, the neck forming the Maracaibo Straits.

West of the Lake, from north to south, are the Districts (counties) of Paez, Mara, Maracaibo, Urdaneta, Perija and Colon. East of the Lake are the Districts of Miranda, Bolivar and Sucre. The District of Buchivacoa, State of Falcon, adjoins Miranda.

The Andes Mountains encircle the Lake in the form of a horseshoe, at a distance of approximately 50 miles from the shore line, forming the Maracaibo Basin, said by geologists to embody ideal geologic conditions for the accumulation of petroleum in vast quantities. In this terrain are the producing fields and the most active development.

In the State of Monagas oil has been found, and active development work is under way.

The oil industry should keep posted

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COMMON SENSE

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Write for particulars.

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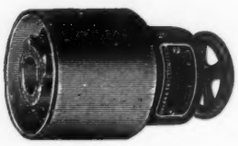
HAVANA
DOUBLE GRIP—
Friction Clutch



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Classified Wants Section

The OIL and GAS JOURNAL
PRODUCING REFINING MARKETING

Engineers Will Meet In Casper Aug. 28-30 —A Practical Program

CASPER, Wyo., Aug. 2.—The Petroleum Division of the American Institute of Mining and Metallurgical Engineers will meet at Casper August 28-30 inclusive. The institute invites all practical oil men to attend.

The first day, Friday, August 28, will be devoted to technical sessions, the first commencing at 9 a. m. and the other at 8 p. m. A smoker will be a feature of the evening session.

On Saturday, August 29, an all day automobile trip will be taken to the Salt Creek and Teapot Fields, in the course of which the new electric power plant of the Midwest Refining Co. will be visited.

On Sunday, August 30, the party will leave Casper in automobiles at 9 a. m. and visit Rawlins, Independence Rock, Ferris Mountains, the Wertz-Mahoney gas fields and the Lost Soldier oil field.

F. Julius Fohs of New York, chairman of the Petroleum Division, will be present at the meeting. E. L. Estabrook of Casper will have the meetings directly in charge and announces he will be pleased to assist in securing accommodations for visitors and that J. C. Lindsey of Casper, chairman of the Rocky Mountain section of the division also stands ready to render any assistance necessary.

Up to this time the papers assured for the technical sessions are the following devoted to the Salt Creek Field: "Production Methods," by Estabrook and Rader; "Oil Field Waters," by H. W. Young; "Well Cementing" by Armstrong and Rader; "Manufacture and Use of Haydite," by Cleary. A number of papers covering other localities and subjects are also planned and will be announced later.

Members and non-members in fact any present interested in the oil industry, especially managers, superintendents and foremen are invited by Mr. Estabrook and the general officers, to take part in the discussions at the technical meetings and to join in the field and refinery trips. These trips, it is promised, will be particularly interesting, as opportunities will be given to see electrically-operated drilling wells and lease pumps, gasoline plants and pipe line pumping stations.

From Rawlins the evening train August 30 will be taken to Salt Lake City, where the 132nd meeting of the American Institute of Mining and Metallurgical Engineers will be held August 31 to September 3, inclusive. Visits to the Bingham, Magna, Arthur and Garfield plants will be among the points of interest included on the itinerary. Following the meeting excursions to Yellowstone National Park and to the canyons of Southern Utah have been provided for those desiring to make either one.

TRADE ASSOCIATION USE OF STATISTICS

WASHINGTON, Aug. 2.—Development and proper use of business statistics by trade associations along the lines laid down by the recent decisions of the United States Supreme Court is strongly urged by the Department of Manufacture of the Chamber of Commerce of the United States in a bulletin just made public, which says:

"The Supreme Court on June 1 handed down its opinion in two cases brought by the Department of Justice against trade associations, holding that the statistical activities of these associations were lawful. Thus these opinions serve to indicate for all trade associations that there is no violation of the Federal anti-trust laws if they gather and distribute the essential business facts which the bution.

"With the clearer understanding of this liberty under the law (which remains unchanged), there is no bar to the development and proper use of business statistics. This clearing of atmos-

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phere should mark the passing of guessing as to the facts concerning our commodity production and distribution provided there is a willingness, at source, to supply the information. It is in the hands of each member of an industry to make possible complete and accurate figures for his line by his own contri-

"It should be borne in mind," the 'Cement and Maple Flooring cases' were bulletin goes on to say, "that the favorable rulings of the court in the so-called 'Cement and Maple Flooring cases' were based on the facts adduced in each case, just as their previous ruling in the hardwood and linseed oil cases were predicated on facts obtaining in these cases—the law remaining unchanged.

"With these rulings as a basis, trade associations will undoubtedly appreciate the opportunity of rendering to their constituency invaluable service by providing means for the gathering and reporting of statistics dealing with such important trade information as producing capacity, orders, shipments, stocks and markets as shown by prices on closed transaction.

"In the renewing of statistical activities it is timely to suggest simplification of methods and forms in order that the information which is found to be obtained and presented as quickly and accurately as possible at the minimum of expense. Such uniformity will enable the transmission of information gathered in the form of charts or graphs when desired much less cumbersome than presenting great masses of figures.

"If uniformity of method is observed, it would greatly simplify the matter of not only charting a given line but also including such other lines as may be of collateral interest or important in comparing the trends of the industry. One of the important essentials of statistics is that they shall be fresh as well as dependable. A very encouraging number of trade associations are at present engaged actively in gathering and distributing such information and many others are famaliar with the methods of doing so properly."

The Department of Manufacture announced that it will cooperate with trade associations interested and will endeavor to bring about the contribution and interchange of information and experience which will prove of interest and value in this work.

SAYS PULVERIZED COAL MAY DISPLACE FUEL OIL

Pulverized coal may displace coal and oil, according to statements made at the meeting of the fuel conservation committee of the Shipping Board by H. W. Brooks, formerly connected with the fuel department of the United States Bureau of Mines and now consulting engineer of the Fuller Lehigh Co., of New York City, makers of the pit furnace designed to use pulverized coal under ship boilers. The pit furnace, it is claimed, releases about four times as many B. t. u.s from coal as any furnace now in use, giving coal a great advantage over oil in point of economy. In the pit furnace the ignition problem is solved by means of four fuel ports or jets on opposite sides of the fire box. The fuel being injected under pressure, forms a series of spirals, ignition being communicated from one to the other within a small space, so that the furnace can esaily be fitted to a marine boiler. Adoption of the new system, it was stated by a fuel expert, may increase the utilization of the thermal value of coal to 80 per cent, as compared with about 65 per cent under the ordinary firing system by reason of the more complete combustion made possible by the spiral ignition.

SALES AGENT FOR AMARILLO

OKLAHOMA CITY, Aug. 2.—The Plains Lubricating Co. of Amarillo, has contracted to act as general sales agent for the Amarillo Refining Co., according to P. H. Herzog, general sales manager of the latter. R. W. Mulford, formerly employed by the Sinclair Oil & Gas Co., has been named manager of the Plains Lubricating Co.

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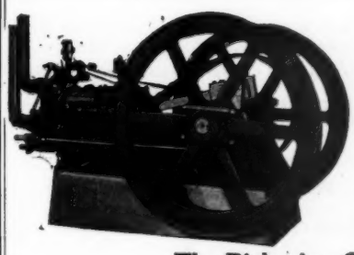
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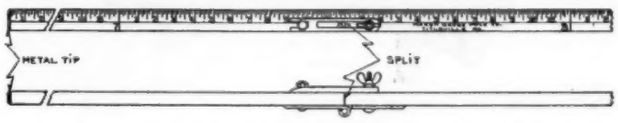

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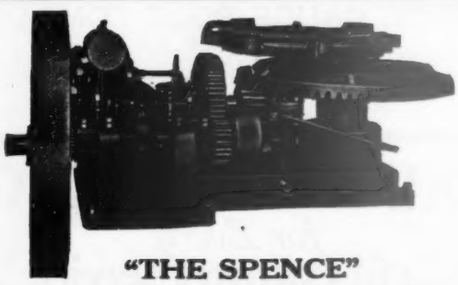

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EMPLOYES TO PURCHASE UNION OIL CO. STOCK

LOS ANGELES, Cal., Aug. 2.—Employes of the Union Oil Co. of California have been given the opportunity of purchasing 100,000 shares of the capital stock of the company, according to announcement made by John McPeak, secretary.

The shares will be sold to employes at $36.50 each, 5 per cent less than the average market price quoted on the New York Stock Exchange for sales over the 60 days prior to July 15, 1925. The offer is subject to the assent of the stockholders and the approval of the California Corporation Commission. All employes in the service for one year are eligible. Employes will be required to pay 10 per cent of the total purchase price when the subscription is made. The balance may be divided into equal monthly payments to be deducted from the payroll over a period of not to exceed five years, or may take up the deferred payments at any time within the five-year period. Subscriptions must be made on or before September 13.

Employes will have no right to vote until the full price is paid, and no dividends will be declared on the stock purchased until it is issued. The company will credit interest on subscriber's deposits at the rate of 5 per cent per annum, calculated semi-annually, to be applied upon the purchase price.

In the event of a stock dividend, subscribers to the employe issue will be entitled to share in proportion to their subscriptions, the new stock to be issued when the full amount of the subscription is paid. In event of an offering of shares to stockholders, the employe subscriber will be entitled to his pro rata or rights and may purchase them upon the same terms as are granted to stockholders generally, or his rights will be sold and proceeds credited on his subscription contract.

The stock offering will be handled by a board of trustees consisting of three officers of the company, with such powers as may be designated by the board of directors.

If the offering is over-subscribed the trustee shall determine the amount to be allotted among subscribers. In the event of a subscriber leaving the service of the company his contract may be cancelled and he shall be entitled to the return of all payments made by him with accrued interest credited.

On the death of a subscriber the amount of all payments made by him, together with accrued interest credited, will be paid to his estate, or his personal representative may elect within 30 days to take full shares to the extent of payments made plus accrued interest, or to pay the balance due on subscription and receive stock therefor. The right of a subscriber to purchase stock under his subscription is not assignable or transferable by operation of law or otherwise. In case of an attempted assignment, his subscription contract shall be cancelled and payments made shall be returned without interest. All matters pertaining to the stock issue are being handled by John McPeak, secretary.

KANSAS WANTS SHARE IN RAINBOW BEND OIL

TOPEKA, Kan., Aug. 2.—The Kansas executive council has been urged to take steps at once to protect the State's interest in the oil development along the Arkansas River in Cowley County, in the Rainbow bend Field.

The State claims the title to all islands in the channels of navigable streams and to the beds of all navigable streams. It now collects a royalty on the sand and gravel taken from the beds of these streams. The State also claims title to all minerals which may be taken from under the river channels.

Last week the State Auditor and the State Treasurer made an inspection of the Rainbow Bend district and at a special meeting of the council the report of the two State officials urged that the State proceed at once to protect what-

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ever rights it may have or claim. It was pointed out that several oil wells are being drilled so close to the river bank that if oil is found it will come, to some extent, from the oil sand beneath the river. The State claims complete ownership to whatever minerals there may be under the bed of any navigable stream.

Upon the suggestion of Governor Pauley, the State Auditor was directed to make a more complete survey and more definite suggestions as to what steps should be taken on behalf of the State.

NEW SHUT-OFF IDEA SAVES 100 FEET SAND

LOS ANGELES, Cal., Aug. 2.—Saving more than 100 feet of good oil sand by pitting its theory of water shut-off against that of rival companies, the Standard Oil Co. has just proved an economically important theory in the development of one of its leases on the west front of the Kern River oil field.

In drilling its No. 4 well on Section 15, as an offset to wells drilled by the Marland Oil Co., and Pan American Petroleum Co. the Standard decided to set 11-inch casing and cement off at 2,367 feet. The casing was set above the top of the oil zone and the hole was completed at 2,500 feet. On a production test it yielded 90 bbls. a day of 12.2 degree gravity.

The singular thing about this achievement is that other companies, operating on adjoining lease, have been setting their water strings 100 feet or more into the oil sand in order, as they are asserted to have thought, that they might shut off a so-called intermediate water which appeared to have been located.

The Sttandard has apparently proved that there is no intermediate water in the sand, and that operators may set the water string above the oil zone and get the benefit of all the sand there is. The Standard is drilling another offset well in the same area, its No. 1 on Section 21. This well has been cemented off stratigraphically the same as the No. 4, but has not been completed.

These are the only two wells that the Standard has had in course of drilling in this particular area. They were drilled as offsets, purely fro the purpose of protecting the lease, and it is understood the company will not drill others there this year unless it is necessary to do further offsetting.

WEST OF MARACAIBO OIL

The first oil from west of Lake Maracaibo reached the markets of the world during the month of June. This, says the Venezuelan News Letter, is an event in the history of the Venezuelan oil fields, of prime importance; one that has been looked forward to in that section of the Maracaibo Basin for the year past. On June 6 the first Curacao S. S. Co. (Royal-Dutch) tanker was loaded at the V. O. C. lake terminal at Punta Piedras, in the harbor of Maracaibo City, with approximately 15,000 bbls. of oil, from Conception—La Paz, and cleared on that day for the refinery at Curacao. There have been three wells completed in the La Paz Field up to July 11; two during June, P-4 and P-6; P-3, the original discovery well, was completed in 1923. This well has not been put on the line as the storage facilities at Conception are taxed to the limit by production from the other four wells. Three wells are drilling. At Conception there were two completions, C-2 and C-3. Four wells drilling. Production from the above four wells during June (20 days actual and 10 days estimated) was 53,500 bbls.

RUMANIA RECORD OUTPUT

It is officially announced that Rumania's crude oil production for the first six months of 1925 was 957,994 metric tons. This was 100,000 tons more than the production during the same period last year. It is stated that the daily production is the highest in the history of the country.

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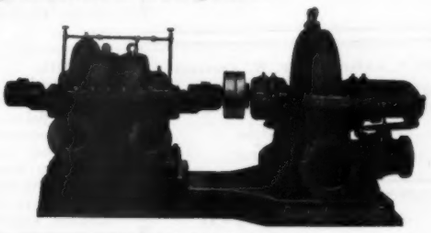

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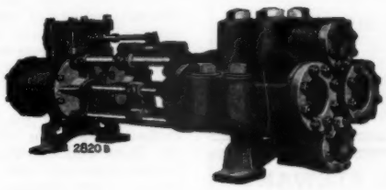

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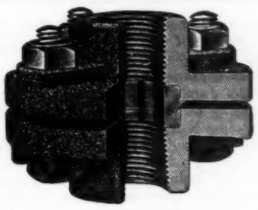

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JAPANESE ORGANIZING SAKHALIN OPERATIONS

Plans for the development of the oil fields of Northern Sakhalin, granted to Japan under the terms of the recent treaty with Russia, are being worked out by the Government and financial interests in the incorporation of a semi-governmental oil company to carry on the work.

Since the occupation of Sakhalin by Japanese troops in 1919 development of the oil fields has been carried on by a private concern, operating under a subsidy from the Japanese Navy. This company, known as the Hokushinkai, was capitalized at $2,500,000, and its stockholders were the Mitsui, Mitsubishi, Kuhara, Okura, Suzuki and Nippon Oil companies. Under this arrangement considerable development work has been done, but there has been no actual production of oil in paying quantities.

The plan now decided upon calls for the formation of a company with a capital stock of $15,000,000, to absorb the Hokushinkai and take over the work. The six companies comprising the Hokushinkai will retain their interest, but the Government will become the heaviest stockholder, and a considerable portion of the stock will be offered for public subscription.

At present 32 trial wells have been drilled on Sakhalin under the auspices of the Hokushinkai. Twenty-four are said to be producing wells, while eight yield no oil. The daily yield is said to be about 15,000 gallons. A small cargo of the oil produced has been taken to the Naval laboratory at Tokuyama for testing and, it is understood, has been found to be of low grade, unsuited to market purposes.

The importance of the Sakhalin fields, so far as Japan is concerned, lies in its availability as a source of fuel oil supply for the Navy.

It is not believed that the Sakhalin fields will produce a grade of crude capable of being refined into gasoline, kerosene or other petroleum products. Naval authorities confidently expect, however, that the field will yield sufficient fuel oil to supply at least two-thirds of the requirements of the Navy.

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Classified Wants
Pages 112-113-114
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CANNOT REMOVE CASING

AUSTIN, Tex., Aug. 2.—Casing can not be legally removed from water wells drilled by the California Oil Co. on Texas University land in Reagan County, the Attorney General's department has informed R. E. L. Saner, general land agent for the University lands. The California Oil Co. is seeking to remove the casing after drilling the wells, but the Attorney General held that to do so will destroy the wells. The question as to whether the University is to pay for the casing in the wells was not presented.

DRILLER OF WELL 646 DIES

WARREN, Pa., Aug. 2.—Frederick Morck, one of the most prominent oil men of the development of the early '80's in this section, died at his home here of paralysis. He was the operator who drilled the famous 646 well in this county in 1882 which produced 6,000 bbls. a day and won nationwide fame. This well was the forerunner of the Cherry Grove oil field. Mr. Morck also developed much territory in Alabama.

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Goodyear Tire & Rubber Co.

Belt Lacing—
Flexible Steel Lacing Co.

Bits—Disc—
U. S. Tool Co.

Bits—Fish Tail—
Federal Supply Co.
Lucey Mfg. Corp.

Bits—Rotary Disc—
Hughes Tool Co.

Bits—Rotary Rock—
Hughes Tool Co.
Reed Roller Bit Co.

Bit Steel (See Steel—Bit)—

Blow-off Valves (See Valves)—

Blowout Preventer—
Regan Forge & Engineering Co.

Blowpipes—
Oxweld Acetylene Co.

Boiler Feed Pumps (See Pumps)—

Boiler Mountings—
Lunkenheimer Co.

Boilers—Oil Country—
Bovaird & Seyfang Mfg. Co.
Bridgeport Machine Co.
Continental Supply Co.
Donovan Boiler Works
Frick-Reid Supply Co.
International Supply Co.
Kewanee Boiler Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Republic Supply Co.
Titusville Iron Works

Boilers—Horizontal Return Tubular—
Kewanee Boiler Co.
Vogt, Henry, Machine Co.

Bolted Tanks (See Tanks)—

Bolts and Nuts—
Black Sivalls & Bryson
Kansas City Bolt & Nut Co.

Bolt Threading Die Heads (See Die Heads)—

Bolt Threading Machines—
Landis Machine Co.
Oster Manufacturing Co.

Bottles—Glass—
Illinois Glass Co.

Box and Pin Steel—
Heppenstall Forge & Knife Co.

Braces—Floor Circle—
Dunn Manufacturing Co.

Break Out Tongs (See Tongs)—

Brick—Fire—
Plibrico Jointless Firebrick Co.

Bridges Steel—
Pittsburgh-Des Moines Steel Co.

Bronze Valves (See Valves—Brass and Bronze)—

Buckets—
Columbian Steel Tank Co.

Buildings—Metal, Sectional (All Types)—
Austin Co.
Blaw-Knox Co.
Butler Mfg. Co.
International Derrick & Equipment Co.
Swartwout Co.
Truscon Steel Co.

Bulk Station Tanks (See Tanks)—

Bull Ropes—
Ajax Rope Co., Inc.
Columbian Rope Co.
Wall Rope Works, Inc.

Bull Wheels—Steel—
Bradford Rig & Reel Co.
Carnegie Steel Co.
International Derrick & Equipment Co.
Moore, Lee C. & Co., Inc.
Parkersburg Rig & Reel Co.

Burners—Gas
Black Sivalls & Bryson
Gould Burner Co.
Okmulgee Boiler & Welding Works

Burners—Oil—
Baker Motors, Inc.
Black Sivalls & Bryson
Continental Supply Co.
Reid, Joseph, Gas Engine Co.

Bushings—Rotary Drive—
Wilson Oil Tools Corp.

C

Cable Bit Steel—
Federal Supply Co.
Heppenstall Forge & Knife Co.

Cables—Drilling, Manila—
Ajax Rope Co., Inc.
Columbian Rope Co.
Frick-Reid Supply Co.
Republic Supply Co.
Wall Rope Works, Inc.

Cables—Steel—
American Cable Co.
Broderick & Bascom Rope Co.
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
Hazard Mfg. Co.
Longhart Supply Co.
National Supply Co.
Republic Supply Co.
Wickwire-Spencer Steel Corp.

Calf Rope—
Columbian Rope Co.

Calf Wheels—Steel—
International Derrick & Equipment Co.
Moore, Lee C. & Co., Inc.

Cans—Carrying—
Columbian Steel Tank Co.

Cans—Water—
Gott, H. P., Mfg. Co.

Carbon—Black Diamond—
Diamond Drill Carbon Co.

Cars—Tank—
American Car & Foundry Co.
General American Tank Car Corp.

Cars—Tank, Leased
American Car & Foundry Co.
North American Car Co.

Casing—
Bovaird Supply Co.
Continental Supply Co.
National Supply Co.
National Tube Co.
Superior Tube Co.
Wirth, Alfred, & Co.

Casing—Wrought Iron—
Reading Iron Co.
South Chester Tube Co.

Casing Connections—
Bridgeport Machine Co.

Casing Elevators (See Elevators, Casing and Tubing)—

Casinghead Gasoline Equipment—(See Natural Gasoline Plant Equipment.)

Casing Head—Control—
Arbon, Paul & Co.

Casing Heads—
Dresser, S. R. Mfg. Co.
Kansas City Hay Press Co.
Oil Well Improvements Co.

Casing Packers (See Packers)—

Casing Pulleys (See Pulleys)—

Casing Shoes—
Baker Casing Shoe Co.
Bartlesville Supply Co.
Bridgeport Machine Co.
Guiberson Corp.

Casing Tongs (See Tongs)—

Casing Tools—
Bridgeport Machine Co.

Castings—Alloy Steel—
Sivyer Steel Casting Co.

Castings—Brass—
Progressive Brass Mfg. Co.

Castings—Chrome Nickel Steel—
Sivyer Steel Casting Co.

Castings—Corrosion Resisting Non Ferrous—
Hills-McCanna Co.

Castings—Electric Steel—
Fort Pitt Steel Casting Co.
Sivyer Steel Casting Co.

Castings—Grey Iron—
Ajax Iron Works
American Car & Foundry Co.
Cunningham Co.
Gaso Pump & Burner Mfg. Co.

Castings—Steel—
Ajax Iron Works
Ohio Steel Foundry Co.
Nugent Steel Casting Co.
Sivyer Steel Casting Co.

Cement—Fire and High Temperature—
Bonfield Refractories Co.

Cement—Portland—
Monarch Cement Co.

Centrifugal Pumps (See Pumps)—

Chain Pipe Tongs (See Tongs)—

Chains—Conveying—
Chain Belt Co.
Link-Belt Co.

Chains—Oil Well—
Chain Belt Co.
Link-Belt Co.
Lufkin Foundry & Machine Co.

Chains—Power Transmission—
Chain Belt Co.
Link-Belt Co.

Check Valves (See Valves)—

Chemical Glassware for Laboratory Use (See Glassware)—

Chemical Treatment Crude Oil Emulsions—
Barnickel, Wm. S. & Co.

Chemical Treatment for Cleaning Out Wells—
Berwald Chemical Co.

Chrome Nickel Steel Castings (See Castings)—

Circulating Heads—
Wilson Oil Tools Corp.

Clamps—Anchor—
Bartlesville Supply Co.

Clamps—Belt—
Federal Supply Co.

Clamps—Collar Leak—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.

Clamps—Hoisting—
Newton Process Mfg. Co.

Clamps—Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.

Clamps—River—
Dresser, S. R. Mfg. Co.
Gaso Pump & Burner Mfg. Co.

Cocks—Brass and Iron—
Kelly & Jones Co.
Walworth Mfg. Co.

Cocks—Water Gauge—
Smith Separator Co.

Coils and Bends—Pipe—
Harrisburg Pipe & Pipe Bending Co.
Kelly & Jones Co.
Midwest Piping & Supply Co.

Collar Leak Clamps (See Clamps)

Commercial Flour Sulphur (See Sulphur)—

Compounds—Boiler—
Dearborn Chemical Co.

Compressor Cylinders (See Cylinders—Compressor)—

Compressors—Air—
Bessemer Gas Engine Co.
Clark Brothers Co.
Cooper, C. & G. Co.
Gardner Governor Co.
Sullivan Machinery Co.
Worthington Pump & Machinery Corp.

Compressors—Ammonia—
Carbondale Machine Co.
Cooper, C. & G. Co.

Compressors — Direct Connected Motor and Gas Engine Driven
Clark Brothers Co.
Cooper, C. & G. Co.
Miller Improved Gas Engine Co.

Compressors—Direct Driven Air and Gas—
Bessemer Gas Engine Co.
Miller Improved Gas Engine Co.

Compressors—Gas—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Cooper, C. & G. Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
National Transit Pump & Machine Co.

Compressors—Portable—
Ingersoll-Rand Co.

Condenser Boxes—
Chicago Bridge & Iron Works
Petroleum Iron Works Co.

Conductor—Wood—
Black Sivalls & Bryson

Consulting and Contracting Engineers (See Engineers)—

Contractors—Rig—
Wertzberger Derrick Co.

Controllers—Liquid Level—
Fisher Governor Co., Inc.
Newton Process Mfg. Co.
Smith Separator Co.

Controllers—Pressure—
Smith Separator Co.

Controllers—Temperature—
Brown Instrument Co.
Foxboro Co., Inc.
Taylor Instrument Co.

Conveyors—Portable Belt—
Barber-Greene Co.

Cooling Towers—Atmospheric—
Braun, C. F. & Co.

Cordage—
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Supply Co.
Wall Rope Works, Inc.

Core Drilling—
Mineral Exploration Co.
Spengler Core Drilling Co.
Wirth, Alfred, & Co.

Core Drills—Diamond—
Longyear, E. J. Co.
Sullivan Machinery Co.

Coring Tools—
Reed Roller Bit Co.
Spengler Core Drilling Co.
Wilson Oil Tools Corp.

Couplings—Plain End Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.

Couplings—Seamless Steel—
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Co.

Couplings—Steel, for Casing, Line Pipe, Drill Pipe and Tubing—
Dayton Pipe Coupling Co.

Corrugated Sheets, Black and Galvanized (See Sheets)—

Cracking Processes—
Kellogg, M. W. Co.
Universal Oil Products Co.

Crown Blocks—
International Derrick & Equipment Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
Moore, Lee C. & Co., Inc.
Parkersburg Rig & Reel Co.
Slater Brothers Turnbuckle Derrick Co.

Crude Sulphur (See Sulphur)—

Cups—Leather—
Auer, C. A.

Cutters—Pipe—
Borden Co.
Trimont Manufacturing Co.

Cylinders—Compressor—
Hope Engineering & Supply Co.

Cylinder Stocks—
Barnsdall Refining Co.
Pure Oil Co.
The Texas Co.

D

Dehydrating Process—
Barnickel, Wm. S. & Co.

Dephlegmators—
Newton Process Mfg. Co.

Depletion Reports—
American Appraisal Co.

Derricks—Steel—
Carnegie Steel Co.
International Derrick & Equipment Co.
Moore, Lee C. & Co., Inc.
O'Brien Steel Construction Co.
Parkersburg Rig & Reel Co.
Slater Bros. Turnbuckle Derrick Co.
Superior Tube Co.
Wirth, Alfred, & Co.

Derricks—Turnbuckle—
National Turnbuckle Derrick Co.
Slater Bros. Turnbuckle Derrick Co.
Wertzberger Derrick Co.

Diamond Core Drills (See Core Drills—Diamond)—

Diamonds for Core Drilling—
Patrick, R. S.

Die Heads—Automatic Screw Cutting—
Landis Machine Co.

Die Heads—Bolt Threading—
Bignall & Keeler Machine Works
Cox & Sons Co.
Landis Machine Co.

Die Heads — Stationary Pipe Threading—
Bignall & Keeler Machine Works
Cox & Sons Co.
Landis Machine Co.
Standard Engineering Co.

Diesel Engines (See Engines)—

Dies—Pipe Threading—
Bignall & Keeler Machine Works
Borden Co.
Landis Machine Co.
Nye Tool & Machine Works
Standard Engineering Co.

Differential Pressure Recorders (See Recorders)—

Direct Driven Pumps (See Pumps)

Disc Bits (See Bits—Disc)—

Dissolved Acetylene (See Acetylene)—

Distillate—
Acme Petroleum Co.

Ditchers—Pipe Line—
Barber-Greene Co.
Buckeye Traction Ditcher Co.

Drainage Tools—
Ames Shovel & Tool Co.

Draw Works—
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
National Supply Co.
Titusville Iron Works Co.

Drillers Hose (See Hose)—

Drilling and Fishing Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Bovaird & Seyfang Mfg. Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Burns Tool Co.
Continental Supply Co.
Hinderliter Tool Co.
Hughes Tool Co.
International Supply Co.
Larkin & Co.
Leidecker Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Spang & Co.
Star Drilling Machine Co.
U. S. Tool Co.
Wirth, Alfred, & Co.

Drilling Engines (See Engines)—

Drilling Equipment—
Clark Brothers Co.
Hughes Tool Co.
O'Brien Steel Construction Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Wirth, Alfred, & Co.

Drilling Gate Valves (See Valves)—

Drilling Machines—
Bridgeport Machine Co.
Leidecker Tool Co.
Oil Well Supply Co.
Star Drilling Machine Co.

Drilling Tools (See Drilling and Fishing Tools)—

Drilling Valves (See Valves)—

Drills—Portable, Air—
Chicago Pneumatic Tool Co.

Drills—Portable Electric—
Chicago Pneumatic Tool Co.

Drive Shoes—
Bartlesville Supply Co.
Larkin & Co.

Drop-Forged Wrenches (See Wrenches)—

Drops and Seats—
Norris Brothers, Inc.

Drums (See Barrels)—

Dynamos—
Westinghouse Electric & Mfg. Co.

E

Electrical Equipment—
Fairbanks Morse & Co.
Pyle-National Co.
Wico Electric Co.

Electric Apparatus (See Apparatus—Electric)

Electric Drilling Equipment—
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

Electric Pumping and Pulling Motors (See Pumping and Pulling Motors—Electric)—

Electric Steel Castings (See Castings—Electric Steel)—

Elevators—Casing and Tubing—
Bovaird Supply Co.
Bridgeport Machine Co.
Dunn Mfg. Co.
Lucey Mfg. Corp.
Wilson Oil Tools Corp.

Elevators—Rod—
Foggan, Geo. N.

Enamels—
Sherwin-Williams Co.

Engineers—Consulting and Contracting—
Hope Engineering & Supply Co.
Kellogg, M. W. Co.
Power Specialty Co.
Westcott & Greis

Engineers—Fire Protection—
Foamite-Childs Corp.

Engineers—Oil Buildings—
Austin Co.
International Derrick & Equipment Co.

Engineers—Oil Treating—
Barnickel, Wm. S. & Co.

Engines—Crude Oil—
Fulton Iron Works
Power Mfg. Co.
Western Machinery Co.

Engines—Diesel—
Bessemer Gas Engine Co.
Busch Sulzer Bros. Diesel Engine Co.
Fulton Iron Works
McIntosh & Seymour Corp.
Western Machinery Co.
Worthington Pump & Machinery Corp.

Engines—Drilling—
Ajax Iron Works
Bessemer Gas Engine Co.
Bovaird & Seyfang Mfg. Co.
Clark Brothers Co.
Continental Supply Co.
Franklin Valveless Engine Co.
Hercules Motor Corp.
Lufkin Foundry & Machine Co.
Pattin Brothers Co.
Power Mfg. Co.
Republic Supply Co.
Titusville Iron Works Co.

Engines—Gas—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Cooper, C. & G Co.
Foos Gas Engine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
International Supply Co.
Miller Improved Gas Engine Co.
National Supply Co.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pattin Brothers Co.
Reid, Joseph, Gas Engine Co.
Titusville Iron Works Co.
Western Machinery Co.

Engines—Gasoline—
Climax Engineering Co.
Continental Motors Corp.
Fairbanks Morse & Co.
Foos Gas Engine Co.
Novo Engine Co.
Western Machinery Co.

Engines—Oil—
Bessemer Gas Engine Co.
Fairbanks-Morse & Co.
Franklin Valveless Engine Co.
Fulton Iron Works
McIntosh & Seymour Corp.
National Supply Co.
Oil Well Supply Co.
Reid, Joseph, Gas Engine Co.
Western Machinery Co.

Engines—Rotary Steam—
Baker Motors, Inc.

Engines—Semi-Diesel, Oil—
Chicago Pneumatic Tool Co.
De La Vergne Machine Co.
Power Manufacturing Co.

Engines—Steam—
Ajax Iron Works
Baker Motors, Inc.
Frick-Reid Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.

Evaporators—
Newton Process Mfg. Co.

Expansion Pistons (See Pistons)—

Extinguishers—Fire—
Foamite-Childs Corp.
Amdyco Corporation.

F

Fence—Chain Link—
Cyclone Fence Co.
Page Fence & Wire Products Ass'n.

Filters—
Metric Metal Works

Fire Brick (See Brick)—

Fire Extinguishers (See Extinguishers)—

Fishing Tools (See Drilling and Fishing Tools)—

Fish Tail Bits (See Bits)—

Fittings—Dropped Forged Steel—
Carbondale Machine Co.
Vogt, Henry Machine Co.

Fittings—Malleable & Cast Iron—
Bovaird Supply Co.
Crane Co.
Frick-Reid Supply Co.
Kelly & Jones Co.
Walworth Mfg. Co.

Fittings—Pipe—
American Cast Iron Pipe Co.
D. & B. Pump & Supply Co.
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.
Gaso Pump & Burner Mfg. Co.
Kellogg, M. W. Co.
Kennedy Valve Mfg. Co.
Lufkin Foundry & Machine Co.
Metric Metal Works
Reading Steel Casting Co.
Republic Supply Co.
United Iron Works, Inc.

Fittings—Steel—
Dayton Pipe Coupling Co.
Ohio Steel Foundry Co.
Pittsburgh Reinforced Brazing & Machine Co.

Flanges—Brass, Iron and Steel—
Kelly & Jones Co.
Metric Metal Works

Flange Unions—
Gaso Pump & Burner Mfg. Co.
Kelly & Jones Co.

Flashlights—
National Carbon Co.

Floating Roofs and Decks—
Chicago Bridge & Iron Works
Columbian Steel Tank Co.

Floodlights—
Pyle-National Co.

Floor Circle Braces (See Braces)—

Force Feed Lubricators (See Lubricators)—

Forging Billets—
Harrisburg Pipe & Pipe Bending Co.
Heppenstall Forge & Knife Co.

Forgings—
Champion Machine & Forging Co.

Friction Clutch Pulleys (See Pulleys)—

Fuel Oil (See Oil—Fuel)—

G

Gas and Oil Gate Valves (See Valves)—

Gas Compressors (See Compressors—Gas)—

Gas Engines(See Engines—Gas)—

Gas Meters (See Meters)—

Gas Oil (See Oil—Gas)—

Gaskets—
Garlock Packing Co.
McCord Radiator & Mfg. Co.

Gasoline—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.

Gasoline—Natural—
Chestnut & Smith Corp.

Gasoline Meters (See Meters)—

Gasoline Plant Equipment—
Bessemer Gas Engine Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Kellogg, M. W. Co.
Newton Process Mfg. Co.

Gas Regulator Casinghead—
Davis Regulator Co.

Gas Regulators—
Chaplin Fulton Mfg. Co.
Davis Regulator Co.
Fisher Governor Co.
Metric Metal Works
Smith Separator Co.

Gas Scrubbers—
Newton Process Mfg. Co.

Gauge Poles—
Marsh Gauge Pole Co.

Gauges—Automatic Tank—
Oil Conservation Engineering Co.

Gauges—Pressure and Vacuum—
Bristol Co.
Foxboro Co., Inc.
Metric Metal Works

Gauges—Test—
Metric Metal Works

Gear Driven Pumps (See Pumps)—

Gears—
Nuttall, R. D., & Co.

Generators—
Westinghouse Electric & Mfg. Co.

Generators—Acetylene—
Oxweld Acetylene Co.

Generators—Steam—
Baker Motors, Inc.

Generators—Turbine—
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Glass Bottles (See Bottles, Glass)—

Glassware—Chemical for Laboratory Use—
Illinois Glass Co.

Governors—
Gardner Governor Co.

Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co., Inc.

Grey Iron Castings (See Castings)—

H

Hammers—Chipping and Calking Pneumatic—
Chicago Pneumatic Tool Co.

Hammers—Riveting, Pneumatic—
Chicago Pneumatic Tool Co.

Hatches—Gauge and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
Newton Process Mfg. Co.

Heat Interchangers—Fluid—
Braun, C. F. & Co.

Heat Treatment for Cleaning Out Flow Lines, Tanks, Etc.—
Berwald Chemical Co.

High Pressure Gate Valves (See Valves—

Hoists—Pneumatic, Geared and Universal—
Chicago Pneumatic Tool Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Wright Manufacturing Co.
Yale & Towne Mfg. Co.

Hose—
Fenwick-Reddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.

Hose—Oil Suction and Discharge—
Goodrich, B. F., Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.

Hot Rolled Strip Steel (See Steel)

Hydraulic Gate Valves (See Valves)—

Hydraulic Jacks (See Jacks)—

I

Insulation Materials—
Celite Products Co.
Johns-Manville, Inc.

Insurance—Fire—
Oil Insurance Association.

Insurance—Tornado—
Oil Insurance Association.

J

Jacks—Hydraulic—
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Well Works
Bessemer Gas Engine Co.
Frick-Reid Supply Co.
Kansas City Hay Press Co.
Spang & Co.

Jars—
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Heppenstall Forge & Knife Co.

K

Kerosene—
Acme Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lead in Oil—
Eagle Picher Lead Co.
National Lead Co.

Lifting Jacks (See Jacks)—

Lighting Equipment—
Climax Engineering Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Liquid Level Controls (See Controllers)—

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
Essex Brass Co.

Lubricating Oils (See Oils)—

Lubricators—
Ajax Iron Works

Lubricators—Force Feed—
Essex Brass Co.
Manzel Brothers Co.
McCord Radiator & Mfg. Co.

M

Machine Tools—
Ryerson, Jos. T., & Son, Inc.

Manholes—Tank—
Oil Conservation Engineering Co.

Manifolds—
Reid, Joseph, Gas Engine Co.

Metal Buildings Sectional (All Types) (See Buildings)—

Meters—Gas—
Foxboro Co., Inc.
Metric Metal Works
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber
Goodyear Tire & Rubber Co.

Motor Controlled Apparatus (See Apparatus—Motor Control)—

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

Motor Trucks (See Trucks)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment—
American Tank Co.
Chaplin-Fulton Mfg. Co.
Continental Supply Co.
Cooper, C. & G., Co.
Griscom-Russell Co.
Roots, P. H. & F. M., Co.
Smith Separator Co.
Westcott & Greis

Nitrogen—
Linde Air Products Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Engines Semi-Diesel (See Engines—Semi-Diesel Oil)—

Oil Field Equipment—
Baash-Ross Tool Co.
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
Cunningham Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Jarecki Mfg. Co.
Kaw Boiler Works Co.
National Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Trumble Gas Trap Co.
Wirth, Alfred, & Co.

Oil Filters—
Burt Mfg. Co.

Oil—Fuel—
Acme Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Gas—
Acme Petroleum Co.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Lubricating—
Barnsdall Refining Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pennzoil Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pennzoil Co.
Pure Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S., & Co.
Houston Pump & Supply Co.

Oil Refinery Equipment (See Refinery Equipment)—

Oil Savers—
Arbon, Paul, & Co.
Oil Well Improvements Co.

Oil Securities (See Securities)—

Oil Suction and Discharge Hose (See Hose)—

Oil Testing Instruments—
Tagliabue, C. J., Mfg. Co.

Oil Well Cementing—
Halliburton, Erle P.

Oil Well Screens (See Screens)—

Oil Well Tools—
Dunn Mfg. Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Star Drilling Machine Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Gulberson Corp.
Larkin & Co.
Layne & Bowler Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.

Packing—
Black Sivalls & Bryson
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Paints—
Aluminum Company of America
Continental Supply Co.
Cook Paint & Varnish Co.
Detroit Graphite Co.
Sherwin-Williams Co.

Paraffin Wax Plant Equipment—
Carbondale Machine Co.

Pipe—Cast Iron—
American Cast Iron Pipe Co.
Continental Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
International Supply Co.
National Tube Co.
U. S. Cast Iron Pipe Fdy. Co.

Pipe—Steel—
Kellogg, M. W. Co.
National Supply Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Superior Tube Co.

Pipe—Wrought Iron—
Frick-Reid Supply Co.
National Tube Co.
Oil Well Supply Co.
Reading Iron Co.
Superior Tube Co.

Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Wks.
Jarecki Mfg. Co.
Landis Machine Co.
Standard Engineering Co.

Pipe Clamps (See Clamps—Pipe)

Pipe Fittings (See Fittings)—

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Ditchers (See Ditchers)

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines
Buckeye Traction Ditcher Co.

Pipe Threading Dies (See Dies)—

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Steel and Iron—
Crane Co.
Power Piping Co.
United Iron Works

Pistons—
Gulberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Arbon, Paul, & Co.
Gulberson Corp.

Plain End Pipe Couplings (See Couplings—Plain End Pipe)—

Plugs—Bottom Water—
Gulberson Corp.

Polish Rods (See Rods—Polish)—

Portable Drilling Rigs (See Rigs)—

Power Pulley—
Jones Oil Well Reamer Co.

Power Pumps (See Pumps)—

Power Units—Portable (See Engines)—

Pre-Heaters—
Newton Process Mfg. Co.

Pulleys—Casing—
Bridgeport Machine Co.

Pulleys—Friction Clutch—
Havana Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works
Axelson Machine Co.
Goulds Mfg. Co.
Myers, F. E., Bro. & Co.
Oil Well Supply Co.
Prescott Co.

Pumping Hangers—
Bridgeport Machine Co.

Pumping Jacks (See Jacks)—

Pumping Powers—
Barnes Mfg. Co.
Bessemer Gas Engine Co.
Climax Engineering Co.
Frick-Reid Supply Co.
Kansas City Hay Press Co.
National Supply Co.
Oil Well Supply Co.
Pattin Brothers Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Air Lift—
Gardner Governor Co.
Ingersoll-Rand Co.

Pumps—Boiler Feed—
Ajax Iron Works
Fairbanks-Morse & Co.
Worthington Pump & Machinery Corp.

Pumps—Centrifugal—
American Well Works
Fairbanks-Morse & Co.
Worthington Pump & Machinery Co.

Pumps—Direct Driven—
Bessemer Gas Engine Co.

Pumps—Fuel Oil Service—
Blackmer Rotary Pump Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.

Pumps—Pipe Line—
Frick-Reid Supply Co.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Power—
Dean Brothers Co.
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Refinery—
Gaso Pump & Burner Mfg. Co.
Kinney Mfg. Co.
National Transit Pump & Machine Co.
Worthington Pump & Machinery Corp.

Pumps—Rotary—
Blackmer Rotary Pump Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Dean Brothers Co.
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Vogt Brothers Mfg. Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Worthington Pump & Machinery Corp.

Pumps—Water—
American Well Works
Gaso Pump & Burner Mfg. Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Toledo Pipe Threading Machine Co.

Ratchet Stocks and Dies—
Toledo Pipe Threading Machine Co.

Ratchet Wrenches (See Wrenches)

Reamers—
Bridgeport Machine Co.
Jones Oil Well Reamer Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Metric Metal Works

Refinery Equipment—
American Radiator Co.
Braun, C. F. & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works
Graver Corp.
Griscom-Russell Co.
Kaw Boiler Works Co.
Kellogg, M. W. Co.
Newton Process Mfg. Co.
Power Piping Co.
Power Specialty Co.
Ross-Meehan Foundries
Reid, Joseph, Gas Engine Co.
Smith Separator Co.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis

Refinery Pumps (See Pumps)—

Refractories—Furance, Stills and Baffles—
Botfield Refractories Co.

Refrigerating Machinery—
Carbondale Machine Co.
Climax Engineering Co.
Vogt, Henry, Machine Co.

Regulators—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co., Inc.
Oil Conservation Engineering Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Contractors (See Contractors)

Rig Irons—
Bradford Rig & Reel Co.
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
Carnegie Steel Co.
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

River Clamps (See Clamps)—

Rods—Polish—
Bradford Motor Works

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Kansas City Bolt & Nut Co.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D. & B. Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Bolt & Nut Co.
National Supply Co.
Republic Supply Co.

Roofing—
Johns-Manville, Inc.

Roofing Tin Plates (See Tin Plates—Roofing)—

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.
Wall Rope Works, Inc.

Rope—Wire—
American Cable Co.
Bovaird Supply Co.
Broderick & Bascom Rope Co.
Bridgeport Machine Co.
International Supply Co.
Wickwire-Spencer Steel Corp.

Rotary Bit Steel—
Heppenstall Forge & Knife Co.

Rotary Disc Bits (See Bits)—

Rotary Drilling Equipment—
Climax Engineering Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.
Wirth, Alfred, & Co.

Rotary Drive Bushings (See Bushings—Rotary Drive)—

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Rock Bits (See Bits)—

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rotary Ventilators—
Swartwout Co.

Rubber Belting (See Belting)—

Rubber Hose (See Hose)—

Run Down Tanks (See Tanks)—

Rust Preventives—
Dearborn Chemical Co.

S

Sand Line Caps—
Oil Well Improvements Co.

Sand Lines—Wire—
Broderick & Bascom Rope Co.
Wickwire-Spencer Steel Corp.

Sand Pumps (See Pumps—Sand)

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws—Temper—
Arbon, Paul, & Co.
Brown Instrument Co.
Burns Tool Co.

Seamless Steel Couplings (See Couplings—Seamless Steel)

Securities—Oil—
Pforzheimer, Carl H., & Co.

Separators—Centrifugal—
Miller, Max B., & Co.

Separators—Oil and Gas
American Tank Co.
Smith Separator Co.

Sheets—
American Steel Band Co.

Sheets—Blue Annealed—
Kansas City Bolt & Nut Co.

Sheets — Corrugated, Black and Galvanized—
American Sheet & Tin Plate Co.
American Steel Band Co.

Sheets—Steel—
American Sheet & Tin Plate Co.
Republic Iron & Steel Co.

Shovels—
Ames Shovel & Tool Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Slush Pump Pistons (See Pistons)—

Slush Pumps (See Pumps)—

Smoke Stacks—
Donovan Boiler Works

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Spears—
Acme Fishing Tool Co.

Special Steel (See Steel—Special)

Split Sleeves (See Sleeves)—

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stationary Pipe Threading Die Heads (See Die Heads)—

Steam Pumps—(See Pumps)—

Steel—All Kinds—
Ryerson, Jos. T., & Sons, Inc.

Steel—Alloy—
Central Steel Co.

Steel—Bit—
Central Steel Co.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Central Steel Co.

Steel Band Wheels (See Band Wheels—Steel)—

Steel Bridges (See Bridges)—

Steel Bull Wheels (See Bull Wheels—Steel)—

Steel Castings (See Castings)—

Steel Couplings for Casing, Line Pipe, Drill Pipe and Tubing (See Couplings)—

Steel Crown Blocks (See Crown Blocks)—

Steel Derricks (See Derricks)—

Steel Fabricators—Structural—
Austin Co.
International Derrick & Equipment Co.
Pittsburgh-Des Moines Steel Co.

Steel Fittings (See Fittings)—

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co.
Slater Brothers Turnbuckle Derrick Co.

Steel Plate Construction—
Tulsa Boiler & Machinery Co.
Vogt, Henry, Machine Co.

Steel Sheets—(See Sheets, Steel)—

Steel Valves (See Valves—Steel)—

Steel Walking Beams (See Walking Beams—Steel)—

Steel Wheels and Tug Rims—
Carnegie Steel Co.
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works
Kellogg, M. W. Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Stocks and Dies—
Toledo Pipe Threading Machine Co.

Structural Steel Fabricators (See Steel Fabricators)—

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sucker Rods (See Rods—Sucker)—

Suction Pumps—(See Pumps)—

Sulphur—Commercial Flour
Texas Gulf Sulphur Co.

Sulphur—Crude—
Texas Gulf Sulphur Co.

Swabs—
Arbon, Paul, & Co.
Guiberson Corp.
Hoffman Mfg. Co.

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Joints—
Oil Conservation Engineering Co.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tank Cars (See Cars—Tank)—

Tank Cars Leased (See Cars)—

Tank Equipment—
Oil Conservation Engineering Co.
Westcott & Greis

Tanks—Bolted—
American Tank Co.
Black Sivalls & Bryson
Butler Mfg. Co.
Gantz Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Columbian Steel Tank Co.
Graver Corp.

Tanks—Cylindrical—
Chicago Bridge & Iron Works

Tanks—Elevated Steel—
Chicago Bridge & Iron Works

Tanks—Field Storage—
American Car & Foundry Co
American Tank Co.
Black Sivalls & Bryson
Donovan Boiler Works
Graver Corp.
Kaw Boiler Works Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Pittsburgh-Des Moines Steel Co.
Tulsa Boiler & Machinery Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Black Sivalls & Bryson
Columbian Steel Tank Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.

Tanks—Run Down—
Black Sivalls & Bryson
Donovan Boiler Works
Newton Process Mfg. Co.
Pioneer Tank & Boiler Co.

Tanks—Truck—
American Tank Co.
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.

Tanks—Underground—
Black Sivalls & Bryson
Butler Mfg. Co.
Columbian Steel Tank Co.
Kewanee Boiler Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co
Tulsa Boiler & Machinery Co.

Tanks—Welded—
American Tank Co.
Chicago Bridge & Iron Works
Gantz Tank Co.

Tanks—Wooden—
Black Sivalls & Bryson

Tape—Marked Pure Manila Rope—
Columbian Rope Co.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.

Tee Casing Heads (See Casing Heads)—

Temperature Controllers (See Controllers—Temperature)—

Temper Screws (See Screws)—

Thermometers, Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Foxboro Co., Inc.
Tagliabue, C. J., Mfg. Co.
Taylor Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tin Plates—Bright—
American Sheet & Tin Plate Co.

Tin Plates—Roofing—
American Sheet & Tin Plate Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing—
Guiberson Corp.

Tongs—Chain Pipe—
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tool Joints—
Bridgeport Machine Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Regan Forge & Engineering Co.

Tool Joint Tongs (See Tongs)—

Tools—Fishing and Drilling (See Drilling and Fishing Tools)—

Tools — Oil Well Drilling (See Drilling and Fishing Tools)—

Torches—
Oxweld Acetylene Co.

Tractor Oil—(See Oil—Tractor)—

Tractors—
International Harvester Co. of America
Rock Island Plow Co.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Manufacturing Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
General Motors Truck Co.
International Harvester Co. of America
White Co.

Truck Tanks (See Tanks)—

Truck Tires (See Tires—Truck)—

Tubes—Boiler, Charcoal Iron—
Reading Iron Co.

Tubes—Boiler Steel—
National Tube Co.

Tubing—
National Tube Co.
Reading Iron Co.
Superior Tube Co.

Tubing Catchers—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Elevators (See Elevators, Casing and Tubing)—

Tubing Rings—
Oil Well Improvements Co.

Tubular Goods—
Oil Well Supply Co.
Republic Iron & Steel Co.
South Chester Tube Co.

Tubular Goods—Wrought Iron—
Reading Iron Co.
South Chester Tube Co.

Turbines for Lighting Equipment—
Lucey Mfg. Corp.
Pyle National Co.
Westinghouse Electric & Mfg. Co.

Turbine Generators (See Generators—Turbine)—

Turnbuckle Derricks (See Derricks)—

U

Underground Tanks (See Tanks)—

Underreamer Bit Steel—
Heppenstall Forge & Knife Co.

Underreamer Cutter Steel—
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Continental Supply Co.
Kelly & Jones Co.

V

Vacuum Pumps (See Pumps)—

Valuations—
American Appraisal Co.

Valve Iron—
Reading Steel Casting Co.

Valves—Blow-off—
Homestead Valve Co.

Valves—Brass and Bronze—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Mfg. Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.
Westcott Valve Co., Inc.

Valves—Drop Forged Steel—
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Continental Supply Co.
Crane Co.
Darling Valve & Mfg. Co.
Edward Valve & Mfg. Co.
Homestead Valve Co.
Jarecki Mfg. Co.
Kennedy Valve Mfg. Co.
Kelly & Jones Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.
Westcott Valve Co., Inc.

Valves—Steel—
Lunkenheimer Co.
Metric Metal Works
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.
Reading Steel Casting Co.
Westcott Valve Co., Inc.

Valves—Tank Vent—
Black Sivalls & Bryson
Oil Conservation Engineering Co.

Valves—Working Barrel—
Axelson Machine Co.
Hough, Charles N., Mfg. Co.
Northrup Equipment Co.

Varnishes—
Sherwin-Williams Co.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Moore, Lee C., & Co., Inc.

Water Gauge Cocks (See Cocks)—

Water Pumps (See Pumps)—

Water Softeners and Filters—
Graver Corp.

Water Well Screens (See Screens)

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welded Tanks (See Tanks)—

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus, Etc.—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Page Fence & Wire Products Ass'n.
Wilson Welder & Metals Co.

Well Drilling and Fishing Tools (See Drilling and Fishing Tools)—

Well Drilling Equipment (See Drilling Equipment)—

Well Shooting—
Eastern Torpedo Co.
Zero Hour Torpedo Co.

Wheels—Steel, Automotive—
Budd Wheel Co.

Winches—
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

Wire Rope (See Rope—Wire)—

Wire Work—All Kinds—
Cyclone Fence Co.

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Franklin Valveless Gas Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Northrup Equipment Co.

Working Barrel Valves (See Valves—Working Barrel)—

Wrenches—Drop Forged—
Williams, J. H., Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Mfg. Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for June, 1925

Runs

	Month	Da. Av.
*Prairie P. L. Co.	3,768,000	125,600
Gulf P. L. Co.	757,686	25,256
Texas P. L. Co.	525,209	17,507
Magnolia Pet. Co.	1,027,317	34,244
Empire P. L. Co.	892,680	29,756
Cosden P. L. Co.	739,671	24,656
Sinclair P. L. Co.	1,434,000	47,800
*Other lines	8,070,000	269,000
Total June	17,214,563	573,819
Total May	17,849,221	575,780
Difference	634,658	1,961

Shipments

†Prairie Pipe Line Co.	4,716,115	157,204
Gulf Pipe Line Co.	1,080,299	36,010
Texas Pipe Line Co.	303,872	10,129
Magnolia Petroleum Co.	1,251,047	41,702
Empire Pipe Line Co.	1,012,089	33,736
Cosden Pipe Line Co.	525,209	17,507
†Sinclair Pipe Line Co.	2,921,411	97,380
*Other lines	8,100,000	279,000
Total June	19,910,042	663,668
Total May	20,862,070	672,970
Difference	952,028	8,302

Stocks

*Prairie Oil & Gas Co.	24,400,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. & Gypsy Oil Co.	8,812,765
The Texas Co.	4,477,974
Magnolia Petroleum Co.	7,399,406
Empire P. L. Co.	3,384,882
Cosden Pipe Line Co.	2,540,400
*Sinclair Crude Oil Purchasing Co.	26,000,000
Carter Oil Co.	17,403,155
*Other lines	10,500,000
Total June	106,918,582
Total May	107,622,564
Difference	703,982

NOTE:—Stocks do not include approximately 7,200,000 bbls. of crude oil held in storage on private tank farms and leases.

*Estimated. †Prairie shipments include Texas crude oil and Sinclair shipments include Texas and Wyoming crude oil.

EASTERN PIPE LINES

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar., '25	Apr., '25
Nat. Transit	169,772.00	177,661.13
S. W. Pa. P. L.	83,742.71	84,300.34
Eureka P. L.	346,441.88	355,836.38
Buckeye P. L. (Macksburg)	285,108.00	292,166.83
Buckeye P. L. (Cleveland)	13,403.55	14,656.88
Buckeye P. L. (Lima, etc.)	132,914.79	137,350.06
Indiana P. L.	13,500.80	13,082.01
Cumberland P. L.	316,783.36	302,133.85
N. Y. Transit	20,196.49	19,371.04
Tidewater P. L.	142,538.93	142,993.61
Pure Oil	191,874.62	188,874.60
Emery P. L.	47,408.71	49,561.25
Indian Ref.	77,750.43	79,952.52
Paragon Dev.	17,370.31	26,334.40
Pittsburgh P. L.	8,440.60	7,594.34
Riggs Ref.	11,590.08	
Total	1,877,817.76	1,891,859.24
Daily average	60,574.77	63,061.64

Note—Indian Refining Co. also reported other receipts of 312,266.09 bbls. Paragon Refining Co. had other receipts of 155,498.15 bbls. Paragon Development Co. had other receipts of 3,462.81 bbls. Pittsburgh Pipe Line had other receipts of 2,803.90 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar., '25	Apr., '25
Nat. Transit	630,679.68	423,581.48
S. W. Pa. P. L.	372,161.19	437,126.73
Eureka P. L.	140,554.54	117,741.39
Buckeye P. L. (Macksburg)	94,087.14	102,149.16
Buckeye P. L. (Cleveland)	1,406.54	728.80
Buckeye P. L. (Lima, etc.)	791,406.13	808,739.39
Indiana P. L.	1,005,156.39	980,306.01
Cumberland P. L.	192,372.05	220,394.42
Crescent P. L.	8,357.38	
N. Y. Transit	551,009.09	436,407.69
Northern P. L.	136,436.26	135,830.48
Tidewater P. L.	161,370.68	113,347.57
Pure Oil	196,445.91	184,755.58
Emery P. L.	44,477.57	37,551.03
Paragon Ref.	68,165.00	137,995.17
Indian Ref.	366,073.95	375,050.50
Paragon Dev.	20,019.17	32,049.80
Pittsburgh P. L.	12,151.49	10,186.32
Total	4,792,329.06	4,542,870.52
Daily average	154,591.26	151,429.02

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of March and April were as follows:

	Mar., '25	Apr., '25
Nat. Transit	1,068,609.40	961,804.76
S. W. Pa. P. L.	746,167.41	676,118.02
Eureka P. L.	1,479,626.62	1,573,219.30
Buckeye P. L. (Macksburg)	243,240.44	259,304.25
Buckeye P. L. (Cleveland)	30,203.54	44,425.91
Buckeye P. L. (Lima, etc.)	3,158,207.59	3,162,495.97
Indiana P. L.	618,007.02	609,868.74
Cumberland P. L.	571,809.44	526,758.25
South P. L.	432,379.30	407,251.52
Crescent P. L.	49,922.81	50,030.81
N. Y. Trans.	808,123.81	907,411.60
North. P. L.	1,021,796.61	1,113,448.02
Pure Oil	446,021.52	448,443.27
Emery P. L.	14,313.36	26,295.16
Paragon Ref.	151,287.77	168,076.60
Indian Ref.	97,438.34	115,545.86
Paragon Dev.	9,158.55	6,749.30
Pitts. P. L.	4,602.85	4,934.41
Riggs Ref.	7,378.90	
Total	11,155,296.59	11,062,081.75
Decrease	34,627.31	96,214.84

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of March and April showing the gross stocks of the above fields:

	Mar., '25	Apr., '25
Penna	3,789,999.21	3,755,227.93
Lima	1,307,447.59	1,286,456.18
Kentucky	1,387,170.92	1,317,936.67
Mid-Cont.	4,621,707.74	4,633,867.79
Illinois	51,971.13	68,593.19
Total	11,155,296.59	11,062,081.75

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1922	1923	1924	1925
January	67,702	75,790	62,638	56,831
February	75,096	71,092	68,023	60,606
March	78,531	76,592	68,731	60,575
April	75,462	75,614	71,058	63,062
May	77,592	77,366	65,942	.....
June	76,193	77,592	68,230	.....
July	76,435	71,879	64,208	.....
August	79,387	76,910	59,942	.....
September	78,512	73,358	62,930	.....
October	77,209	76,266	64,976	.....
November	75,313	70,762	56,282	.....
December	73,351	69,271	55,814	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1922	1923	1924	1925
January	119,792	171,067	145,518	157,889
February	111,362	164,219	148,732	160,863
March	127,753	185,487	147,098	154,591
April	127,068	170,761	147,611	151,429
May	127,840	177,102	134,997	.....
June	137,638	173,598	143,010	.....
July	137,872	168,330	124,187	.....
August	153,275	142,766	123,120	.....
September	158,761	137,266	127,325	.....
October	165,345	134,597	123,170	.....
November	165,677	131,426	124,400	.....
December	172,861	139,909	151,392	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1923	1924	1925
January	14,040,567	12,907,202	11,353,276
February	14,028,437	11,844,068	11,192,924
March	13,873,146	10,906,752	11,158,297
April	13,737,575	10,922,742	11,062,081
May	13,815,622	11,335,309	.....
June	14,541,253	11,544,204	.....
July	14,645,584	12,062,361	.....
August	14,770,529	12,221,676	.....
September	14,803,444	12,206,336	.....
October	14,604,111	12,664,061	.....
November	14,157,726	12,268,530	.....
December	13,444,361	11,583,680	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1924—	Receipts	Shipm'ts	Stocks
April	3,311.84	2,066.78	13,001.54
May	3,036.50	5,338.21	10,699.53
June	3,188.31	407.01	13,481.18
July	3,067.74	2,334.29	13,214.63
August	2,901.36	6.21	16,109.73
September	2,794.58	5,775.89	13,128.42
October	3,343.40	1,836.50	14,590.33
November	2,700.13	482.89	12,427.56
December	3,130.34	2,659.13	12,886.77
1925—			
January	1,730.86	1,681.15	12,938.48
February	2,702.05	4,564.70	11,075.83
March	3,177.21	2,354.30	11,898.74
April	3,040.41	1,780.11	13,159.04

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, May 1	2,054,858.94
Runs from wells	594,147.69
Other receipts	592,205.84
Regular deliveries	541,137.58
Others deliveries	650,225.65

The amount of Illinois oil run by the Tidewater Pipe Line Co. in April was 28,717.45 bbls. and deliveries were 96,106.27. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries from the Illinois Field as follows:

1924—	Runs	Deliveries
April	514,356.43	339,546.10
May	761,080.44	510,414.43
June	725,060.87	528,403.38
July	759,646.84	552,386.50
August	720,457.73	519,335.79
September	714,875.36	535,762.80
October	741,767.42	543,863.77
November	650,147.63	521,459.21
December	640,919.23	595,942.28
1925—		
January	695,513.42	572,304.77
February	636,635.20	514,661.52
March	754,335.68	611,348.49
April	622,865.14	637,242.85

The Tidewater Pipe Co., Ltd., also delivered in April 283,593.23 bbls. of Oklahoma oil. The total deliveries of all grades by the Tidewater were 492,046.07 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per week	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
March	24,826	32,418	297,388	111,885	146,552	613,069	.....	52,612	.....	.....	52,612	665,681
April	22,162	68,600	269,031	119,700	133,000	612,493	.....	17,731	.....	.....	17,731	630,224
May	57,806	35,000	292,873	86,685	92,127	564,491	.....	.....	.....	.....	.....	564,491
June	66,669	17,731	136,031	117,600	44,569	376,600	.....	70,238	.....	2,569	72,807	449,407

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per week—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
March	109,639	112,224	523,806	64,358	215,649	1,604,676	174,776	390,418	27,776	54,649	647,619	2,252,295
April	130,900	60,200	418,369	68,831	144,900	823,200	145,131	321,300	84,931	50,869	602,231	1,425,431
May	195,776	54,873	440,097	112,903	135,261	938,910	219,030	254,030	59,773	41,818	574,651	1,513,561
June	157,962	84,700	497,000	101,738	238,938	1,080,338	225,638	196,938	63,000	24,033	509,609	1,589,947

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountain	Eastern Fields	Total
July:	Month	19,274,755	15,191,860	11,917,137	2,671,053	4,597,969	1,815,966	3,768,398	3,371,600	62,608,738
	Daily average	621,766	490,060	384,424	86,195	148,322	58,580	121,561	108,761	2,019,637
August:	Month	19,112,998	16,526,356	11,808,876	2,717,398	4,359,241	1,702,525	3,749,375	3,286,000	63,261,769
	Daily average	616,548	533,076	380,931	87,658	140,621	54,920	120,948	106,000	2,040,702
September:	Month	18,308,233	16,299,030	11,089,492	2,638,900	4,029,535	1,795,575	3,330,007	3,150,000	60,640,772
	Daily average	610,274	543,301	369,650	87,963	134,318	59,853	111,000	101,936	2,021,359
October:	Month	18,696,559	16,189,898	10,942,005	2,768,455	3,983,696	1,774,707	3,058,268	3,395,000	60,808,588
	Daily average	603,115	522,255	353,000	89,305	128,506	57,249	98,654	109,516	1,961,567
November:	Month	17,767,034	15,955,620	10,731,264	2,597,460	3,461,050	1,965,921	2,788,110	2,941,000	58,207,459
	Daily average	592,234	531,854	357,709	86,582	115,035	65,531	92,937	98,033	1,940,248
December:	Month	18,795,126	16,031,185	11,264,915	2,537,443	3,380,511	1,870,876	2,302,888	3,000,850	59,183,794
	Daily average	606,294	517,135	363,384	81,853	109,049	60,351	74,287	96,402	1,909,155
January:	Month	18,743,288	15,462,800	13,790,195	2,520,858	3,278,484	1,774,072	2,627,676	3,065,993	61,263,366
	Daily average	604,622	498,800	444,845	81,318	105,758	57,228	84,760	98,903	1,976,233
February:	Month	16,869,833	13,905,780	11,361,896	2,466,660	2,886,296	1,547,461	2,666,335	2,905,000	54,609,216
	Daily average	602,494	496,635	405,782	88,095	103,082	55,266	95,226	103,750	1,950,333
March:	Month	18,626,009	14,403,716	13,047,068	2,824,534	3,564,473	1,807,517	2,734,235	3,282,000	60,289,552
	Daily average	600,839	464,636	420,886	91,114	114,983	58,307	88,201	105,871	1,944,502
April:	Month	17,959,653	14,055,450	12,683,520	2,971,110	7,560,240	1,695,780	2,744,691	3,157,000	62,927,444
	Daily average	598,655	468,515	422,784	99,037	252,008	56,526	91,490	107,150	2,026,692
May:	Month	18,320,328	14,486,579	13,165,005	3,493,266	11,813,996	1,887,729	2,799,542	3,167,300	69,633,745
	Daily average	607,107	467,309	424,678	112,686	381,097	60,572	90,308	102,171	2,246,250
June:	Month	19,288,135	13,832,970	12,583,740	3,175,440	9,200,372	1,900,506	2,754,498	3,113,500	65,849,161
	Daily average	642,938	461,099	419,458	105,848	306,679	63,350	91,816	103,783	2,194,972
	Total 12 months	222,261,951	182,340,244	144,385,113	33,382,577	62,115,863	21,538,590	35,324,023	37,835,243	739,183,604
	Daily average	608,937	499,562	395,576	91,185	170,180	59,010	96,778	103,658	2,025,161

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